TOM WAITS REISSUES

QUADRAPHONIC LIVES!

stereophile

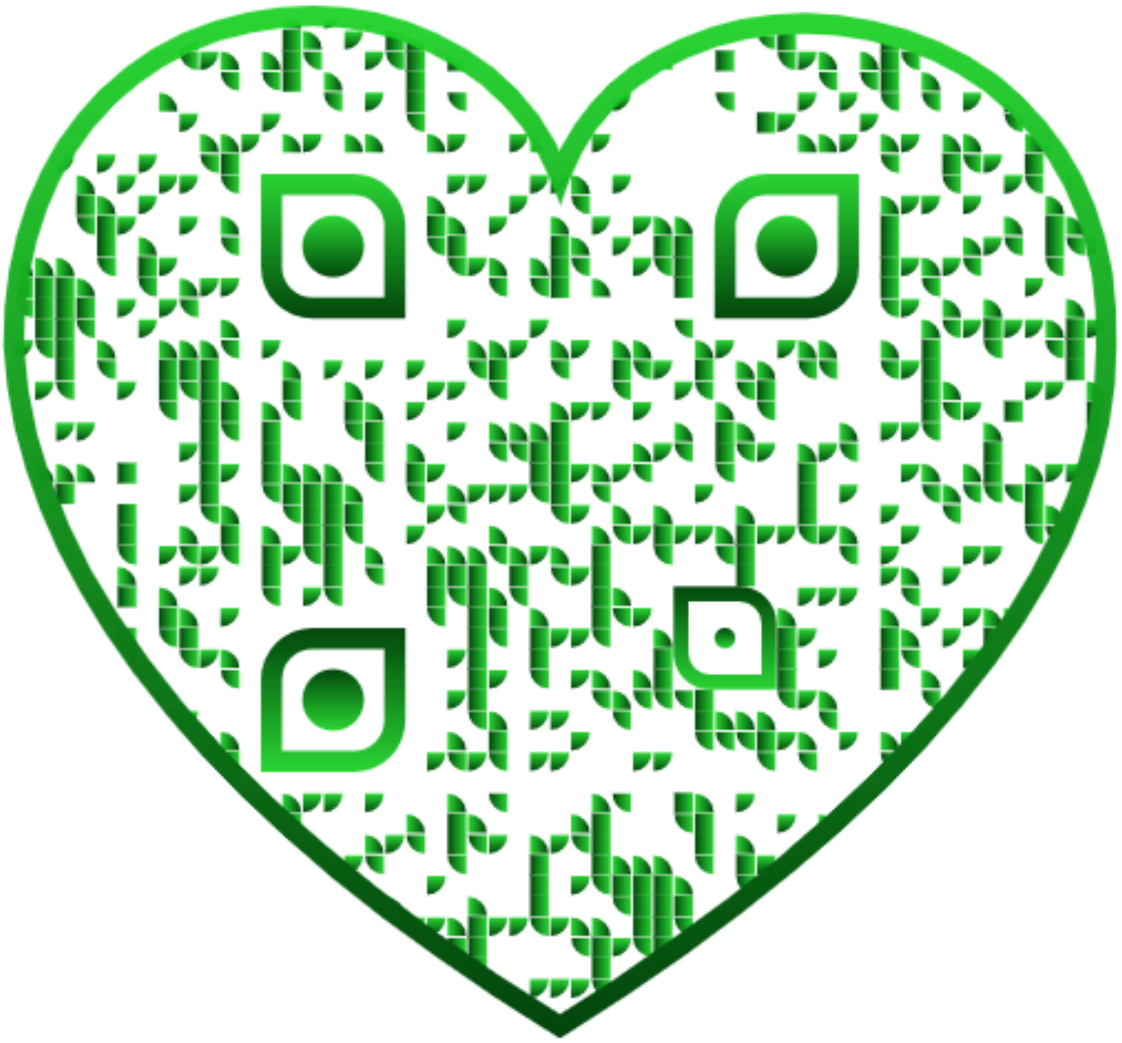
ONLINE AUTHORITY: STEREOPHILE.COM

T+A S 530
LINE-SOURCE LUXURY

OCTAVE V70
PSYCHEDELIC SYNERGY
TAD GRAND EVOLUTION 1
SOULFUL SONICS
LINN KLIMAX SOLO 800
SCOTTISH AMP SINGS TRUE

MAY 2024
$8.99 US
$10.99 CANADA

05
0 71486 34967 9



2020

MAGICO

AS WE SEE IT

BY JIM AUSTIN

THIS ISSUE: *Stereophile* heads for AXPONA.

It's showtime!

Though I'm writing this in early March, this As We See It column will be published in the May issue, which is the issue that will go to AXPONA, America's largest audio show, held each non-pandemic year at the Renaissance Schaumburg Hotel & Convention Center near Chicago. This year's show takes place Friday–Sunday, April 12–14. The show opens each day at 10am and closes at 6pm Friday and Saturday; Sunday's closing time is 4pm. If you're going to the show, don't forget to stop by the *Stereophile* booth, Location 9213 in the exhibit hall.

According to the show website, this should be the biggest AXPONA ever, with more than 600 brands represented in 200 rooms. There's a headphone show ("Ear Gear Experience") and a record fair. Many folks from the industry will be making presentations, on topics including electronic design, acoustics, vinyl setup, pressing vinyl records, and much else. Absolutely not to be missed: "The Steve and Herb Show," featuring Audiophiliac Steve Guttenberg and *Stereophile*'s own Herb Reichert, Saturday at 1pm in Schaumburg East.

At a show like AXPONA, the real attraction is those 200 listening rooms, where every year, quite a few companies demonstrate new products. It's early still as I write this, but I asked the show organizers to send me a list of product debuts, and they were able to send a few. T+A will debut the Criterion S 230 loudspeaker; see the related item in Industry Update. Phillips Design, which I know mainly for the omnidirectional OH-16, is launching a new model called the Diamond, said to be a highly customizable true-dipole, open-baffle speaker with built-in amplification and DSP, made from "premium hardwoods." A possible match: VPE Electrodynamics is introducing the Model 2 DSP Dipole woofer, intended to match the dipole radiation pattern of planar loudspeakers.

The digital wizards at Grimm Audio are launching the MU2—*Stereophile* review forthcoming—which combines a Roon server with what sounds like a very innovative DAC and an analog preamplifier: Just add amplification and a pair of speakers (or perhaps a pair of Grimm's own active digital monitors) and you're ready to make music.

If you're presenting at the show, you really should read "Showing Your Best," a Re-Tales column from the April issue by Jason Victor Serinus and me offering tips on putting your best foot forward at an audio show; it's online at bit.ly/ShowWell. Light your system well for photography (*not* from behind). Remember to bring your dusting cloth and use it frequently.

Another piece of advice we gave in that column was to play *real music*—to resist the temptation to play the same old standards and hi-fi novelty tunes. There's a deep, radical principle behind this suggestion, although it's also kind of obvious: The point of a really good hi-fi system is not to show it off to your friends and neighbors (though there's no harm in that) but to convey music's emotion as directly and powerfully as possible. To show that your system is capable of that, skip the sound-effects tracks and songs so deeply familiar they provoke some of us to flee, hands over ears.

Can your demo system put across the emotion of an 80-year-old album?

Not that you shouldn't play something familiar. When I sent a query to several veteran show attendees, Rob Schryer responded, "I like the idea of exhibitors playing music that more visitors are familiar with and have a sonic baseline for." Excellent point. Rob recommends Pink Floyd—but maybe not the Pink Floyd you're thinking of. Rob suggests *Echoes (The Best of Pink Floyd)*. "The album has many of Pink Floyd's signature tunes, but what's fun about this collection is its sound quality—it was the best I'd heard these songs from any of the many earlier editions I'd heard them on, CD or LP: great tone, dynamics, spatial effects, deep bass, clean highs, solid images with air around them, etc."

Rogier van Bakel recommended a song that, though obscure, has been heard at hi-fi shows before. He calls "The Incredibles" by Gordon Goodwin's Big Phat Band "a witty, exciting big-band orchestral piece." It's from the album *The Gordian Knot*, released in 2019 and available on LP, CD, and streaming. It's eight minutes long; *you* decide whether to play the whole thing. Rogier also recommended "Chorale" by Philip Glass, performed by Slagwerk Den Haag, off *Vitreous Body*: "It's an all-acoustic percussion piece, incredibly well recorded."

Compared to that, my own suggestion is a little bit boring, the sort of thing one often hears at audio shows because it's good. Cannonball Adderley's *Somethin' Else* is an all-time classic jazz album—one of a handful of albums that almost everyone knows at least a little bit , up there with *Kind of Blue*, *Take Five*, and *The Blues and the Abstract Truth*. It's great jazz that's easy to listen to—and, with the caveat that I've never heard a pristine original, I've never heard it sound better than it does on the Mobile Fidelity Sound Lab Ultradisc One-Step pressing. If your room has an analog source and you don't have this album, run over to the record fair. Assuming it hasn't sold out by showtime, I'll suggest that they bring some extra copies. There's also a hybrid SACD.

Jason Victor Serinus loves classical music and opera more than many people love life. What *I* love is his first suggestion. "If you dare play something mono from 1944, tenor Jussi Björling's incomparable rendition of Puccini's 'Nessun dorma' (from *Turandot*) brought down the house at a recent meeting of Pittsburgh Opera and Symphony professionals." Can your demo system put across the emotion of an 80-year-old album?

Jason, who was apparently fixated on "Nessun dorma," continued. "If you must have stereo, opt for Luciano Pavarotti's 1972 rendition from the complete recording of *Turandot* conducted by Zubin Mehta.

"If you want to hold them for 10 minutes or longer, play Maria Callas's superbly recorded 1958 rendition of the sleepwalking scene from Verdi's *Macbeth*, conducted by Nicola Rescigno. The 24/96 remastering from 2023 will send chills up their spines, and the soundstaging is superb.

"Want something gorgeous and French? Cue up Véronique Gens singing Guillaume Lekeu's 'Nocturne' with chamber orchestra accompaniment." Who doesn't want something gorgeous and French? ■

SUBMERGE

WILSON AUDIO
50 YEARS
1974 - 2024
AUTHENTIC EXCELLENCE

stereophile

MAY 2024 Vol.47 No.5

p.119

p.123

FEATURES

119 Tom Waits's Island Records Reissues
An all-star team of engineers remasters, recuts, and reissues the wizard-poet's Island Records discography. By Robert Baird.

123 Quad Lives!
The short-lived 1970s fad that won't go away—and that's a good thing. By Tom Fine.

EQUIPMENT REPORTS

45 T+A Solitaire S 530 loudspeaker
by Brian Damkroger

59 Linn Klimax Solo 800 mono power amplifier
by Jason Victor Serinus

73 TAD Grand Evolution One loudspeaker
by Sasha Matson

85 Octave Audio V 70 Class A integrated amplifier
by Robert Schryer

101 Cambridge Audio MXN10 streamer–D/A processor
by Tom Fine

113 Silent Angel Bonn NX network switch
by Jim Austin

p.113

p.85

p.59

SEE OUR EXCLUSIVE EQUIPMENT REPORT ARCHIVE AT WWW.STEREOPHILE.COM

Stereophile (USPS #734-970 ISSN: 0585-2544) Vol.47 No.5, May 2024, Issue Number 532.

Copyright © 2024 by AVTech Media Americas Inc. All rights reserved.

Published monthly by AVTech Media Americas Inc., 260 Madison Avenue, 8th Floor, New York, NY 10016. Periodicals Postage paid at New York, NY and additional mailing offices. Subscription rates for one year (12 issues) U.S., APO, FPO, and U.S. Possessions $19.94, Canada $31.94, Foreign orders add $24 (including surface mail postage). Payment in advance, U.S. funds only. POSTMASTER: Send all UAA to CFS. (See DMM 707.4.12.5); NON-POSTAL AND MILITARY Facilities: send address corrections to Stereophile, P.O. Box 420235, Palm Coast, FL 32142-0235. Mailing Lists: From time to time we make our subscriber list available to companies that sell goods and services by mail that we believe would be of interest to our readers. If you would rather not receive such mailings, please send your current mailing label, or an exact copy, to: Stereophile, Mail Preference Service, P.O. Box 420235, Palm Coast, FL 32142-0235. Subscription Service: Should you wish to change your address, or order new subscriptions, you can do so by writing to the same address. Printed in the USA.

Accuphase

INFLATION

NEW LOWER PRICING, SAME PRECISION & QUALITY.

Seems like the price of everything is going up lately. But not here. We're excited to be rolling out new, inflation-crushing prices in the United States. Visit **accuphase.com,** then head to your nearest Accuphase dealer to experience impeccable quality sound and shop the new pricing that's as much as 25% less.

HEAR IT AT AXPONA | ROOMS 1130 & 1126

AXISS AUDIO

ACCUPHASE | BEAUDIOFUL | FRANCO SERBLIN | GAUDER AKUSTIK | NIHON ONKYO ENGINEERING
REED | SHELTER | SOULUTION | TRANSROTOR | YUKISEIMITSU AUDIO | ZENSATI | AIRTIGHT

Go to **axissaudio.com** to find an Accuphase dealer near you.

stereophile
MAY 2024 Vol.47 No.5

p.23

3 As We See It
Stereophile heads to AXPONA

11 Letters
Stopped asking why; quantitative thinking; full immersion.

GET ON YOUR SOAPBOX! VISIT THE STEREOPHILE.COM FORUMS

15 Industry Update
Paul Messenger passes; new dates and a new venue for FLAX; R2R calibration tapes still rolling; live music is special, science says; and new-product announcements and upcoming hi-fi–related events.

STAY INFORMED: GO TO **STEREOPHILE.COM FOR UP-TO-THE-MINUTE INFO.**

23 Gramophone Dreams
Herb Reichert spends some quality time with the dCS Lina DAC and Clock with loudspeakers and headphones.

31 Brilliant Corners
The Degritter Mark II record cleaner and All Blues, a new vinyl listening space in Manhattan. By Alex Halberstadt.

37 The Spin Doctor
The EMM Labs DS-EQ1 optical phono equalizer, upgrades for the Wand 14-4 turntable, and inner record sleeves from M·A Recordings. By Michael Trei.

127 Aural Robert
Jazz label Verve and Jack White's Third Man Records collaborate on a new series of records featuring jazz broadly defined. By Robert Baird.

129 Revinylization
A premium reissue of Joe Henderson's *Power to the People* in Crafts' Jazz Dispensary Top Shelf series. By Robert Baird

131 Record Reviews
The Recording of the Month for May is Isabelle Faust's performance of Benjamin Britten's Violin Concerto. In Classical, our reviewers consider a collaboration between the Takács Quartet and a bandoneon virtuoso, Smetana's *Má vlast* with Semyon Bychkov and the Czech Philharmonic, and the latest recording (Tchaikovsky, Korngold) from the Nash Ensemble. In Jazz, there's new stuff from vocalist Julie Kelly, a beautifully recorded album from Rufus Reid and a young pianist, *One for All* with the great George Coleman, a new discovery from Archie Shepp, and a supergroup led by Chris Potter. Rock/Pop features new recordings from John Leventhal, the Umbrellas, and Tom Rush, plus the first audio-only release of a 1982 concert by The Who and a deluxe vinyl reissue of UFO's *Lights Out*.

p.15

p.131

143 Manufacturers' Comments
Representatives of Linn, Octave, Cambridge Audio, and Silent Angel respond to our reviews of their products.

146 My Back Pages
(Un)healthy obsessions. The second part in a two-part series by Rogier van Bakel.

INFORMATION

140 Advertiser Index
144 Dealers' Showcase
144 Manufacturers' Showcase
145 Audio Mart

p.131

Follow *Stereophile* on Facebook: www.facebook.com/stereophile.

Please Recycle This Magazine
Remove Inserts or Samples Before Recycling

101 X-Treme
MKII
Learn more
mbl-northamerica.com

2023 OVERALL the absolute sound PRODUCT OF THE YEAR AWARD
2024 the absolute sound EDITORS' CHOICE AWARDS
mbl
This changes everything!

stereophile

MAY 2024

EDITOR JIM AUSTIN
JIM.AUSTIN@STEREOPHILE.COM
TECHNICAL EDITOR JOHN ATKINSON
MANAGING EDITOR MARK HENNINGER
SENIOR CONTRIBUTING EDITORS
HERB REICHERT, KALMAN RUBINSON,
JASON VICTOR SERINUS
WEB PRODUCER JON IVERSON
COPY EDITOR LINDA FELACO

FOUNDER J. GORDON HOLT

ART DIRECTOR JEREMY MOYLER

CONTRIBUTING EDITORS (AUDIO)
MARTIN COLLOMS, BRIAN DAMKROGER, JASON DAVIS,
ROBERT DEUTSCH, TOM FINE, LARRY GREENHILL,
ALEX HALBERSTADT, SASHA MATSON, KEN MICALLEF,
JULIE MULLINS, THOMAS J. NORTON, ROBERT SCHRYER,
MICHAEL TREI, ROGIER VAN BAKEL,

CONTRIBUTING EDITORS (MUSIC)
ROBERT BAIRD, LARRY BIRNBAUM, PHIL BRETT,
RAY CHELSTOWSKI, THOMAS CONRAD, TOM FINE,
KURT GOTTSCHALK, ANDREY HENKIN, ANNE E. JOHNSON,
SASHA MATSON, MIKE METTLER, KEN MICALLEF,
DAN OUELLETTE, ROGIER VAN BAKEL, STEPHEN FRANCIS VASTA

ADVERTISING
GENERAL MANAGER KEITH PRAY
KPRAY@AVTECHMEDIAUSA.COM
ADVERTISING MANAGER ED DIBENEDETTO,
EDIBENEDETTO@AVTECHMEDIAUSA.COM
SALES COORDINATOR ROSEMARIE TORCIVIA,
RTORCIVIA@AVTECHMEDIAUSA.COM
DIGITAL INQUIRIES KEITH PRAY,
KPRAY@AVTECHMEDIAUSA.COM

CHECK US OUT ON THE WEB AT STEREOPHILE.COM.

AVTECH MEDIA AMERICAS INC
EDITORIAL DIRECTOR PAUL MILLER
FINANCE DIRECTOR OWEN DAVIES
GENERAL MANAGER KEITH PRAY

IMPORTANT STEREOPHILE
CONTACT INFORMATION

SUBSCRIPTION INQUIRIES
USA (800) 666-3746
CANADA & INTERNATIONAL (515) 244-0924
EMAIL: STPCustserv@cdsfulfillment.com
POST: Stereophile, PO Box 37965, Boone IA 50037-0965
Please include name, address, and phone number
on any inquiries.

REPRINTS
For high-quality custom reprints and eprints, please
contact Keith Pray at kpray@avtechmediausa.com.

SUBMISSIONS
Any submissions or contributions from readers shall be
subject to and governed by AVTech Media's User Content
Submission Terms and Conditions, which are posted at
www.stereophile.com/images/terms.html

BACK ISSUES
To order back issues and recordings visit
shop.stereophile.com or call (888) 237-0955

SUBSCRIBER LIST
Occasionally our subscriber list is made available to
reputable firms offering goods and services we believe
would be of interest to our readers. If you prefer to be
excluded, please send your current address label and a
note requesting to be excluded from these promotions
to AVTech Media Americas Inc., 260 Madison Avenue, 8th
Floor, New York, NY 10016, Attn: Privacy Coordinator.

PRINTED IN THE USA. COPYRIGHT © 2024 BY AVTECH MEDIA AMERICAS INC. ALL RIGHTS RESERVED.

Power Is Fundamental

Audio and Video are “Simply” Modulated Power

As with our famous Niagara power products, our PowerQuest power conditioners include Non-Sacrificial Surge Protection and Extreme-Voltage Automatic Shutdown. Set & forget, free from concern about catastrophic surges as well as ever-present micro-spikes.

But what really matters is lower noise, and greater clarity and dynamic contrast — more to love about your audio and video::

- Linear Noise-Dissipation Technology provides linear wide-bandwidth noise reduction
- Included detachable Direction-Controlled Long-Grain Copper AC power cables maximize RF-noise dissipation and minimize current-compression
- PQ-707 only: Transient Power Correction and 45-amp on-demand current reservoir enable Niagara-level in-your-gut dynamics and jump-factor

After spending quality time with the PQ-303 in his system, *The Absolute Sound’s* Aaron Jenkins marveled over the newly expansive soundstages, wealth of natural detail, and improved bass definition.

He concluded simply, **“With a PQ-303 in place, my system just sounds better.”**

PowerQuest 303: US$459.95
PowerQuest 505: US$699.95
PowerQuest 707: US$1,299.95

audioquest®

The iconic design you know just got

a performance upgrade you'll love

Hear it Live at Axpona 2024!

Room 730 & 739

L100 classic MkII

$2,400.00 /ea

- Dual-spider woofer resulting in lower bass distortion
- Midrange and tweeter improvements resulted in smoother response
- Dual binding posts, upgraded crossover components, and layout to separate LF and HF
- Available in limited edition Gloss Black

L82 classic MkII

$2,900.00 /pr

- Improved woofer design, with primary focus on frequency response smoothness
- Tweeter upgrade, with a slight adjustment to diaphragm thickness to lower self-resonance
- Dual binding posts, upgraded crossover components, and layout to separate LF and HF
- Available in limited edition Gloss Black

Contact your sales representative for more information.

©2024 HARMAN International Industries, Incorporated. JBL and the JBL logo are trademarks of HARMAN International Industries, Incorporated, registered in the United States and other countries. All rights reserved.

JBL.COM

LETTERS

FEEDBACK TO THE EDITOR

TAKE HEED! Unless marked otherwise, all letters to the magazine and its writers are assumed to be for possible publication. Please include your name and physical address. We reserve the right to edit for length and content.

Stopped asking why

When my *Stereophile* reaches my doorstep, the first thing I turn to is Herb Reichert's reviews. I don't care what he's reviewing; I love how he writes about it. In April's edition, he shared his thoughts on an unexpected emotional response to Brice Marden's last paintings. I've read that article a number of times now and have been so moved by Herb's sharing of emotions. It reminded me of a musical experience I had recently.

In Columbus, we have a talented and underrated symphony, which I try to support through donations and attendance. Last month, there was a presentation of Tchaikovsky's Piano Concerto No. 1 with visiting pianist Claire Huangci. Opening the concert was a piece by John Wineglass called "*Alone Together*," a contemporary piece with ruminations on the COVID pandemic. As a physician who was in the deepest part of the pandemic taking care of critically ill patients in the hospital, I rolled my eyes at the thought of Mr. Wineglass having anything true to say about it. Just figured I'd endure it to get to the main attraction.

I was stunned by the piece. He captured the chaos, anger, sadness, and disorientation I felt. During the second movement, there was a haunting and beautiful melody that pulled me in and helped me feel I was never alone. I immediately was taken back to those dark times and the light I felt as it improved. I was moved to tears and my partner, KP, who loves me and knows what I went through, was there to be a rock for me. Like Herb, I was emotionally jolted out of my everyday experience quite unexpectedly. Herb asked the question why. As I've aged, I've stopped asking that question. All I know is that I am so fortunate to be alive on this earth and be open to being emotionally moved by a piece of music, an art installation, or a truly human story in a stereo magazine.

Jeff Thurston
Columbus, Ohio

Mr. Thurston, thank you for your lovely message. For our readers' benefit, I'll mention that a recording of "Alone Together" (not to be confused with Dave Mason's solo debut album or the jazz standard by Arthur Schwartz with lyrics by Howard Dietz, first performed by the Leo Reisman Orchestra in 1932 and since by a long list of musicians from Pepper Adams to Mal Waldron) is available from Albany Records on an album called Alone/Together: The Dreams & Diversity of the American Composer, *performed by the Prague Radio Symphony under Julius P. Williams. It's available streaming on Qobuz at 24/48. Search on Prague Radio Symphony.*—**Jim Austin**

People who have not been trained in physics read about skin effect and spend more money to avoid it, not realizing that the skin effect becomes relevant only at frequencies well beyond the audible range.

Quantitative thinking

I wish to thank Jim Austin for his January 2024 article on cartridge loading. He noted that the physics of cartridge resonance is qualitatively correct but *not* quantitively correct. The same issue is seen with cables: Litz construction sold as a way to address the skin effect, in which higher-frequency current is induced to move toward the wire's surface, reducing the effective cross section and increasing its resistance. People who have not been trained in physics read about skin effect and spend more money to avoid it, not realizing that the skin effect becomes relevant only at frequencies well beyond the audible range. At audible frequencies, with about 10' of 8-gauge speaker wire, the skin effect causes a resistance increase of a few hundredths of an ohm at 20kHz. Put this in series with a 4 ohm loudspeaker, and the resulting attenuation is less than a percent. Nobody will hear that.

Barney Vincelette
(PhD in physics and applied math)
Houston, Delaware

Mr. Vincelette,
As a fellow physics PhD and hi-fi nut, I learned quickly that my PhD was less help than I expected. Few important problems can be solved conceptually. To gain real insight, you've got to do the work—the calculation—which requires a serious investment of time and energy even for people with real quantitative chops.

This cuts both ways. On the one hand, manufacturers occasionally turn to some scientific concept—a plausible-seeming mechanism—to justify a performance claim. To really make their case, they'd need to do the math (but how many customers would be able to follow the math?). On the other hand, if you want to disprove a claim, you've ... got to do the math.

For what it's worth, Stereophile *reviewers are expected to ignore all that. They're charged with setting aside preconceptions based on obvious nonsense or even correct science and prioritize what they hear. "Tell us what it sounds like" is our motto. We run into trouble when we start asking "how?" or "why?" before we finish answering "what?". That's why reviewers aren't shown measurements before they submit their reviews; we don't want measurements to bias listening impressions. It's their ears we pay them for, and their ability to communicate what they hear.*

Marketing aside, it comes down to how well a product performs. It's the engineering that matters, not the engineering-speak.—**Jim Austin**

LETTERS TO THE EDITOR should be sent as e-mails only. Email: stletters@stereophile.com. Please note: We are unable to answer requests for information about specific products or systems. If you have problems with your subscription, call (800) 666-3746, or email STPCustserv@cdsfulfillment.com, or write to *Stereophile*, P.O. Box 37965, Boone, IA 50037-0965.

Full immersion

I am listening on my main rig to Bartók's *Concerto for Orchestra*, Karina Canellakis conducting the Netherlands Radio Philharmonic Orchestra, in 5-channel DSD128. I am wearing Apple's new Vision Pro, which leaves my ears free. I have selected the "Mt. Hood" environment, which immerses me visually at the near shore of a tranquil lake surrounded by evergreens, the peak looming large on the horizon. It is raining gently. The sonic imaging—what the in-room surround audio system is presenting—I perceive more fully than ever before. It is far different from what I experience by closing my eyes. The equipment vanishes in a different way. As Kalman Rubinson has written, "The presence of the loudspeakers was wiped from my consciousness." Every nuance of music and sound is there, the very essence of what I've pursued as an audiophile for more than 50 years. The technology of virtual reality opens a way to enjoy (and evaluate) our precious playback systems more deeply.

Desmond Fretz
Camarillo, California

AXPONA

TRIANGLE

ROOMS
472 & 716

MAGELLAN 40TH

Anniversary Edition

Elegance, Technology, Performance, Pleasure & Emotion

CONTACT :

Frank Gazzo
503-970-8531
frankgazzo@antalaudio.com
www.trianglehifi.com

EXCLUSIVE DEALERS

Hudson Valley
New York

Audio Visions
San Francisco

Big Kids Toy
North Carolina

Hi-Fi Loft
New York

House of Stereo
Florida

Holm Audio
Chicago

EXCLUSIVE DEALERS

Centre Hi-Fi
Quebec

Motet
Canada

AXPONA

AUDIO EXPO NORTH AMERICA

ROOMS 472 & 716

ELECTROCOMPANIET

If music *really* matters™

AW 800 M

The All-new Flagship
Stereo / Mono Power Amplifier

AW 300 M *New!*

The All-new
Mono Power Amplifier

Unleash the power of music with unparalleled precision and immersive sound that will transport you to a whole new dimension of audio bliss!

50 YEARS OF GREAT SOUND
MADE IN NORWAY

WWW.ELECTROCOMPANIET.COM

Antal Audio Group
For USA dealers
antalaudio.com
503-970-8531

Red Leaf Audio
For Canadian dealers
redleafaudio.com
905-746-9334

TA-01
ZERO Tracking Tonearm

TT-01
ZERO Tracking Turntable

Thiele

Now available in USA & Canada

Distributed by

WYNN AUDIO

FONO ACUSTICA · Entreq Energy Transforming Equipment · KARAN ACOUSTICS · MÉTRONOME · Kalista ART OF MUSIC · VIMBERG

20 Wertheim Crt, Unit 31 | www.wynnaudio.com | USA: +1 (212) 826-1111 | Canada: +1 (647) 995-2995

INDUSTRY UPDATE

AUDIO NEWS & VIEWS

SUBMISSIONS: Those promoting audio-related seminars, shows, and meetings should email the when, where, and who to stletters@stereophile.com at least eight weeks before the month of the event. The deadline for the August 2024 issue is May 20, 2024.

PAUL MESSENGER, REST IN PEACE

Jim Austin

As this issue went to press, we learned that longtime *Stereophile* contributing editor Paul Messenger had died after a long illness. His career will be remembered in an online post and in *Stereophile*'s next issue.

THE FLORIDA AUDIO EXPO GETS A BIGGER VENUE AND NEW DATES

Jim Austin

In early March, following the completion of another successful show at its original location, the organizers of the Florida Audio Expo announced a new, larger venue and new dates for the 2025 show. Next year's show will take place Friday to Sunday, February 21–23, at the Sheraton Tampa Brandon Hotel. Quoted in a press release, FLAX Managing Partner Bart Andeer praised the show's previous venue, the Embassy Suites Tampa Westshore, then added, "Our new venue will offer more options for larger exhibitor spaces and a suitable marketplace area." Companies interested in exhibiting should contact Andeer at barta@floridaaudioexpo.com.

MRL LIVES! (CALIBRATION TAPES STILL ROLLING)

Tom Fine

Magnetic Reference Laboratory, the last US-based maker of industry-standard analog calibration tapes, is rising after a near-death experience and, if all goes well, is expected to have resumed regular production by the time you read this.

As reported in January's Industry Update, MRL, the last American manufacturer of alignment tapes, was in the process of closing up shop due to the deteriorated condition of its antique equipment. Alignment tapes are essential for recording, playback, and digital conversion of analog; they're the only way to ensure that a tape machine's playback equalization and the azimuth of its magnetic heads are set to a standard.[1] Company owner Jay McKnight died in 2022, leaving the company to his heirs. Former operator Chuck Booye, who ran MRL out of his garage, stopped accepting new orders in mid-December of 2023—and had been feeling hard-pressed to complete the orders he had in hand due to the aged condition of the equipment. Moreover, he'd been operating it as a one-man show for the last 15 years.

In the time since *Stereophile* reported that story, McKnight's four sons have reconstituted the company. Jeff, the second son, is running it as interim CEO. The production equipment is in a commercial building in Half Moon Bay, California, operated by Ben Cortez, a long-time MRL engineer who designed and built much of the proprietary electronics. Efforts are underway to modernize the plant, especially its ancient computer system.

The first new-production tapes were shipped in late February. In a phone interview on February 27, Jeff McKnight told me he had just made a breakthrough in modernizing and somewhat automating the ordering system and was prioritizing back orders so those who needed a calibration tape yesterday will get one soon. He hopes to work through the order backlog by midyear, but it may take longer. "That's assuming the computer and the equipment continue to function," he said.

Jeff told *Stereophile* that MRL is receiving helpful advice and other assistance from a brain trust of magnetic recording: tape machine expert John French of JRF Magnetic Sciences; magnetic head maker Greg Orton

1 There are several playback-EQ standards, the most common being IEC (formerly CCIR) and IEC2 (formerly NAB). Playback EQ alignment is different for each tape speed; common pro-audio speeds are 7.5, 15, and 30 inches per second, and common consumer speeds are 3.75 and 7.5ips. Azimuth is ultimately adjusted to the tape being played, but alignment tapes offer a "studio standard" alignment to which an individual machine's play, record, and erase heads can be set so that they operate correctly together.

CALENDAR OF INDUSTRY EVENTS

ATTENTION ALL AUDIO SOCIETIES: We have a page on the *Stereophile* website devoted to you: stereophile.com/audiophile-societies. If you'd like to have your audio-society information posted on the site, email Chris Vogel at vgl@cfl.rr.com. (Please note the new email address.)

It is inappropriate for a retailer to promote a new product line in "Calendar" unless it is associated with a seminar or similar event.

CALIFORNIA

- June 7–9, 2024: T.H.E. Show SoCal hosts their hi-fi show once again in Costa Mesa at the Hilton Orange County/Costa Mesa. In addition to hi-fi exhibits, there are seminars, a "Headphonium," luxury cars with high-performance audio systems, and live music acts. For more information, visit theshownow.com.
- Friday evenings, 5–7pm PST: The San Francisco Audiophile Society hosts a virtual happy hour via Zoom. This is open to anyone who'd like to join us to talk about hi-fi and whatever else is on your mind. For more information and registration, visit bit.ly/3RyaqX9.

ILLINOIS

- April 12–14, 2024: The supersized hi-fi show AXPONA (Audio Expo North America) will take place at the Renaissance Schaumburg Hotel and Convention Center in Schaumburg, Illinois. In addition to hundreds of hi-fi exhibits and an Ear Gear Expo, there will be seminars from industry experts and live music from jazz guitarist Bobby Broom and the Grammy Award–nominated Secret Sisters. For more information and to buy tickets, visit axpona.com.

NEVADA

- January 10–12, 2025: Save the dates for the inaugural Las Vegas edition of T.H.E. Show, which will take place at a multicampus venue yet to be announced. For more information, visit theshownow.com.

NORTH CAROLINA

- August 2–4, 2024: Audio Advice Live is a showcase of music and home hi-fi and home theater equipment from a wide range of domestic and imported brands, presented by Audio Advice, which operates two showrooms in the area in addition to the audioadvice.com website. This year's Live event is scheduled to take place again at the Sheraton Hotel in Raleigh, North Carolina. For details, visit live.audioadvice.com.

of Flux Magnetics; and design engineer John Chester, who built the original sound system at the legendary Fillmore East and helped construct and run the sound and light system at Woodstock. Chester, who is now the tape-transfer expert at Plangent Processes, is currently at work updating MRL's control system, moving from a 1990s computer made before PCI cards or IDE hard drives to a modern automation system, likely on the Raspberry Pi platform.

According to Jeff, MRL's two customized Studer A80 tape machines (one for $^1/_4$" and $^1/_2$" and one for 1" and 2" tape widths) "seem to be in mechanically good shape," though he acknowledged that they are 40 years old and will need some refurb work. Orton is fabricating new, custom ceramic recording heads; all MRL tapes are recorded full track with magnetic flux out to the edges of the tape, which requires purpose-built heads. Playback heads are a simpler proposition: The system uses stock Studer playback heads, used to perform QC checks, akin to how the calibration tapes are used in the real world. When he does need replacements, which Jeff McKnight said will be soon, he'll be able to source them through French.

These developments should come as good news—even a relief—for any analog fan. It bears repeating from our prior report that everyone who buys anything made from tapes—be it AAA LPs, reissues of recordings made prior to relatively recent history, etc.—should be concerned if the main playback calibration standard for all tape machines is at risk for extinction. It sounds like this disaster has been averted.

LIVE MUSIC IS SPECIAL, SAYS A SCIENTIFIC STUDY

Julie Mullins

When was the last time you attended a live music performance? Was it a qualitatively different experience than listening to similar music on your hi-fi system? A recent study[2] supports a position taken by many (but not all) audiophiles: that there's something special about live music. Evidently, it's built into our evolutionary makeup.

In "Live music stimulates the affective brain and emotionally entrains listeners in real time," a team of researchers led by Dr. Sascha Frühholz from the Cognitive and Affective Neuroscience division of the Department of Psychology at the University of Zurich found that live music moves us more emotionally than recorded music does. "Here, we show that live music can stimulate the affective brain of listeners more strongly and consistently than recorded music," the study's introduction states.

The researchers developed a method using fMRI to observe listeners' brain activity in real time as they listened to live and recorded music, performed by the same musicians in this case. While a live pianist played music said to be akin to "jazz standards," functional MRI machines imaged the listeners' neurofeedback, especially in the amygdala, the brain's center of emotion. The musicians—pianists in this case—were instructed "to dynamically induce variations in their musical performance that could potentially drive an increase in the mean left amygdala signal of the listeners." Listeners were said to be "non-musicians" and were unaware that both prerecorded and live music, including deliberate modifications, would be heard.

Most concertgoers have experienced live musicians responding to audience reactions, creating a feedback loop in real time. The researchers did something similar, creating a "closed neurofeedback loop" in which the pianist(s) could also see and respond and adapt immediately to the listeners' responses by changing the music as the researchers observed listeners' brain activity. The pianists played music that was "pleasant" and "unpleasant"; when played live, both types "seemed to elicit significantly higher amygdala activity compared to the same musical pieces presented as recordings." Live music not only engaged areas of the brain needed for processing emotions from music; it also connected more brain areas, forming a broader neural network, the study said.

"Many of the positive correlations for live music concerned rhythm and spectral features, highlighting the notion that both temporal and spectral features connect musicians and listeners in live performances." This may also speak to sonic characteristics valued by audiophiles and music lovers: accuracy in the time domain and absence of dynamic compression, for example. The researchers found strong synchronization between the pianists and the listeners with live music. Obviously, musicians can only respond to audiences' real-time reactions when playing live.

"Live music is acoustically different from recorded music, and only live settings lead to a close coupling between musical performances and emotional responses in listeners," the study authors wrote. Hearing musicians play in person is also a social experience. "This can perhaps be traced back to the evolutionary roots of music," Frühholz said.

The findings underscore audiophiles' desires to achieve the "holy grail" of listening: a system that can play music back as if it were happening live.

TIDAL ADDS A DEALERSHIP

Jason Victor Serinus

Tidal, the German manufacturer of luxury speakers and electronics, has long maintained a very slim and exclusive dealer network. Now, Tidal has added Edward (Ed) DeVito's Audio-Ultra of Sumner, Washington, to its list of dealer partners. The Seattle-area dealership is only the third US Tidal dealer, joining Doug White's The Voice That Is of Broomall, Pennsylvania, and Christopher Thornton's Artisan Fidelity of Saint John, Indiana.

"I've always appreciated the Tidal brand," DeVito told *Stereophile*. "I think it sounds really good, and I greatly appreciate the build quality and aesthetic. They're a top-notch company that makes everything, including cables, and takes great care with impedance matching."

Audio-Ultra will carry a wide range of Tidal components, beginning with the Piano G2 and Contriva G3 loudspeakers, Prisma preamplifier, Contros digital music controller, Intra class-D power amplifier, and cabling. The Akira loudspeakers and Ferios monoblocks are expected to arrive at the dealership mid-August.

PAUL MCCARTNEY'S *LIVERPOOL ORATORIO* TO RECEIVE FULL STAGING

Julie Mullins

Ohio's Cincinnati Opera, the second-oldest opera company in the US (after the Metropolitan Opera), recently announced that it will present the world stage premiere of *Paul McCartney's Liverpool Oratorio*.

Cincinnati Opera's new production of *Liverpool Oratorio* will mark the work's first-ever operatic staging when it premieres in late July as the conclusion to the company's summer season, according to a recent press release. Sir Paul McCartney collaborated with the late composer/conductor Carl Davis on the oratorio when the Royal Liverpool Philharmonic first commissioned the work, which premiered in 1991. Both are credited as composer and librettist.

The oratorio's "book" is semi-autobiographical, centering on Shanty, a young Liverpudlian growing up in the World War II era and experiencing joys and struggles through childhood, school days, war, love, and reconciliation, the press release said. The cast features tenor Andrew Owens as Shanty and includes soprano Jacqueline Echols as his love interest, Mary Dee, and mezzo-soprano Kayleigh Decker and bass-baritone Kevin Short in multiple roles.

"McCartney's melodic pop sensibility

2 See pnas.org/doi/10.1073/pnas.2316306121.

is evident alongside stunning classical orchestration, resulting in an accessible yet intricate musical work," the press release stated.

In a letter to Cincinnati Opera, McCartney said, "I am writing to express my wholehearted support for this project. I believe that the Cincinnati Opera is uniquely positioned to bring this work to life in a new way."

Four performances of *Paul McCartney's Liverpool Oratorio* will take place at Cincinnati Music Hall between July 18 and July 27. For more information, visit cincinnatiopera.org.

A NEW 'TABLE FROM AMG, PRESENTED BY SIERRA SOUND

Jim Austin

As this section is being prepared, it's still a bit early for announcements about product debuts at AXPONA, but news of one did arrive here in time. In late February, German turntable manufacturer Analog Manufaktur Germany (AMG) announced the Giro MK II Wood, which features a cherry wood frame incorporating design elements of AMG's more expensive Viella turntable. The Giro MK II Wood, which is offered at a retail price of $10,500, will have its US debut in Room 530 at AXPONA; indeed, it seems that this will be its worldwide debut. The price does not include a tonearm, but the Giro MK II Wood can utilize either of AMG's 9" tonearms; a choice of arms is offered at an unspecified package price. Sierra Sound will also be demoing products from Benz Micro of Switzerland and the Rigid Float tonearm from Japan's ViV Laboratory, described in a press release as "highly unconventional."

As a longtime advocate of real music at audio shows, I can't resist taking this opportunity to note that on Friday and Saturday in Room 530, at 5:30pm, Sierra Sound will present "Metal Night," for "those with more unconventional musical tastes. All open-minded music lovers are invited to join this celebration of analog audio." The quote is from the press release.

AUDIO-TECHNICA INTRODUCES EXOTIC AMP/PREAMP AND HEADPHONES

Julie Mullins

Most people associate Audio-Technica with affordable equipment, especially turntables and phono cartridges. The company has long offered premium products, however, and appears lately to be moving even more upscale: The $9000 limited-edition AT-MC2022 cartridge, released to commemorate the company's 60th anniversary in 2022, is an obvious example.

Now the Japanese company is continuing on that path—indeed, upping the ante considerably—with an ultra-high-end headphone amp/preamp and headphone duo, the HPA-KG Naru tube amplifier/preamplifier and ATH-AWKG headphones. "Naru" comes from the Japanese term "Narukami," which means "god of thunder," and evokes reverence for the power of nature. Thunder is represented by drums in traditional performances, and by extension, speaks to music.

The front and side panels are made of rare, exotic Kurogaki wood with strikingly contrasting woodgrain patterns. Audio-Technica's site says that the Kurogaki name means "black persimmon" and refers to very old persimmon wood that contains rare black grain patterns inside. The process of drying the wood is said to be challenging, adding to its rarity and status. The ATH-AWKG earcups are made of this Kurogaki wood. Both the HPA-KG and the ATH-AWKG are handcrafted in Tokyo.

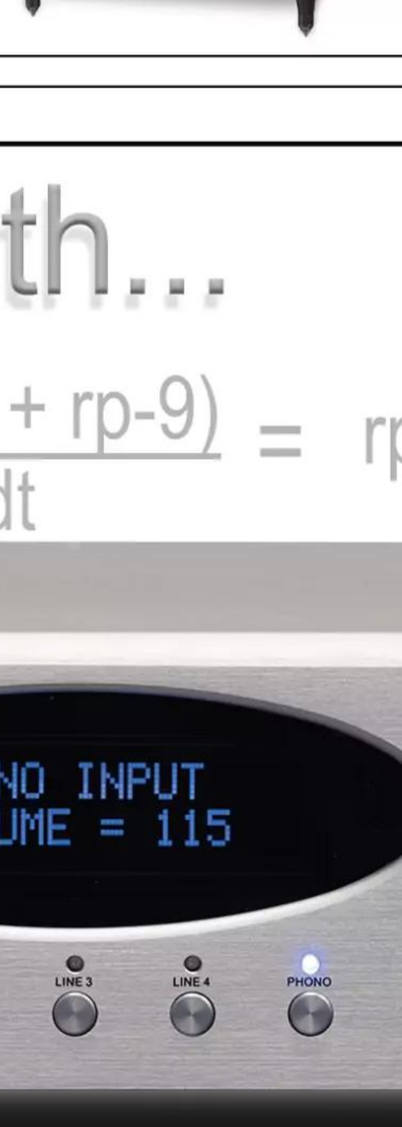
Frank Doris, who represents Audio-

Technica in the US, provided some extra details via email. "The HPA-KG Naru tube amplifier/preamplifier is styled to reflect the appearance of a *karesansui*, or dry landscape garden, representing water flows," he said. The HPA-KG uses a dual-mono configuration with four Takatsuki 300B power tubes in the current-amplification stage and ECC83S tubes in a shunt-regulated push-pull circuit for the voltage stage. The unit deploys Lundahl transformers, including a special output transformer

T+A LAUNCHES THE CRITERION SERIES OF LOUDSPEAKERS

Jim Austin

In late February, German hi-fi manufacturer T+A elektroakustik announced the launch of a new model in the Criterion series, the Criterion S 230. The Criterion series speakers, including the S 230, are derived from the Solitaire series technically and visually, T+A says; see Brian Damkroger's review of the Solitaire S 530 in this issue. The S 230 features a similar "symmetric directivity" design, which is intended to reduce reflections from room boundaries. The S 230, however, is simpler, with a magnesium-dome tweeter in place of the Solitaire's long magnetostatic tweeter. "Having developed this new tweeter allows us to make our Symmetric Directivity System accessible in entirely new price ranges," project leader Max Kirschke said, quoted in the press release. In the bass, the S 230 utilizes what T+A calls its "MultiResonator Transmission-line Technology," which, the press release says, "resembles an organ pipe." Criterion S 230 is available in satin matte rubbed lacquer silver, satin matte rubbed lacquer black, and Makassar finishes. They're available for order now at $11,900/pair and should be arriving at authorized dealers around the time this issue hits newsstands.



The New Math...

$$\iint \frac{d(rp\text{-}7 + rp\text{-}9)}{dt} = rp\text{-}5!$$

ROGUE AUDIO

Derived From The Award Winning RP-7 and RP-9

The all new RP-5 V2

mm /mc phono • tube headphone • feature rich • pure Rogue...only $3,995

Rogue Audio, Inc • Brodheadsville, PA • 570-992-9901 • www.rogueaudio.com

with "amorphous alloy cores," which Audio-Technica says offer "high saturation magnetic flux density, and excellent frequency response." High-purity silver windings minimize resistance.

The integrated headphone amplifier is equipped with a standard single-ended 1/4" headphone jack and a balanced 4.4mm four-pin XLR connector. Source inputs include one L–R RCA pair and two pairs of XLR connections. The HPA-KG can also serve as a preamp via its preamp outputs—a R–L pair each of line-level outputs on XLR and RCA. There are three user-adjustable headphone impedance settings.

What about those headphones? "The headphones feature purpose-designed 53mm drivers with Permendur magnetic circuitry and 6N-OFC high-purity oxygen-free voice coils among other refinements. The headphones are equipped with detachable cables with 4-pin balanced and standard 1/4" jacks."

The exotic HPA-KG headphone amplifier/preamplifier retails for a cool $108,000 and the headphones go for $4200.

NEW SPEAKER OFFERINGS FROM Q ACOUSTICS

Julie Mullins

For those seeking to simplify their systems, or perhaps add an additional setup to their quarters, the UK's Q Acoustics has added a "micro-tower" M40 model to their M-series wireless active-speaker-system lineup. With its hi-rez Bluetooth capabilities, it could be considered an expansion of the company's compact M20 active bookshelf model.

The M40 is designed to be a convenient "all-rounder" system for music listening in addition to gaming and TV connectivity, so it is equipped with several connection options. Asynchronous USB 2.0 and optical S/PDIF (TosLink) inputs accept streams up to 24/192. The M40 deploys the latest Bluetooth 5.0 version and supports aptX, aptX HD, aptX Low Latency, SBC, and AAC codecs. There's also a 3.5mm auxiliary input and a subwoofer output: a mix of both channels low-pass filtered at 12dB/octave with a 330Hz cutoff.

DSP plays a role in helping the M40s sound bigger than they are. According to Q Acoustics information, the DSP uses "multiple bi-quad stages" to control the input signals for EQ and more ahead of the amplification stage. DSP includes options for room placement—"close to a corner," "close to a wall," or "in free space"—but Q Acoustics recommends selecting by ear. These bass-reflex speakers also come with removable port plugs to tune the bass response.

The M40s deploy the same 125mm (5") C^3 (Continuous Curved Cone) mid/bass driver design found in the company's recent 5000 series of passive loudspeakers (see below); here, two C^3s are used in each speaker. A decoupled 22mm (0.9") fabric-dome tweeter handles upper frequencies.

Low-distortion digital class-D amplification, specified to output 100W of peak power and 50 watts RMS continuous, drives the speakers.

The M40s come in Black, White, or Walnut finishes and retail for $999/pair.

As this issue went to press, Q Acoustics announced a new flagship in its 5000 series, the 5050. The passive 5050 shares many of the acoustic technologies described above, including C^3 drivers and a hermetically sealed, decoupled tweeter, plus what Q Acoustics calls "Point-2-Point" internal bracing and Helmholtz pressure-equalizer tubes inside the cabinet. Each speaker has two 6" (150mm) mid/bass drivers in a D'Appolito configuration with the sealed tweeter. The frequency range is specified as 37Hz–30kHz and the sensitivity as 91.8dB/1.83V/m. The 5050, which joins the 5010, 5020, and 5040 in the lineup, is available finished in Satin Black, Satin White, Santos Rosewood, and Holm Oak. The retail price is $1999/pair. ■

Simply Iconic

Alumine Two.Five

Stenheim's latest creation

The iconic simplicity of the Alumine Two's ground-breaking design now in a floorstanding speaker.

STENHEIM

SWISS MADE

GO BEYOND THE BOOM

KKEF Listen and believe

There are subwoofers.
And there are KEF Subwoofers.

Beyond conventional bass, KEF redefines immersive audio by adding the missing piece: accuracy.

KEF's comprehensive range of subwoofers deliver depth and detail in equal measures. Room-friendly designs and innovative technology keep them ahead of the pack, so it's just a case of selecting the one that best suits your needs.

Our KEF dealers are here to help transform your audio experience - this way you won't miss a thing.

★ **AVIQ**
Huntsville, AL
256-713-8912

Laguna Audio
Cave Creek, CA
949-632-6436

Audio Video Evolution
Campbell, CA
408-628-0771

C & M Sales
Palmdale, CA
661-965-3469

Cinematec
Eastvale, CA
951-675-0148

ROCK ON AV
Irvine, CA
818-305-4225

SmarTek Home
San Diego, CA
858-874-8700

The Audio Store
Newington, CT
860-666-5006

★ **Wave Media Systems**
Winter Garden, FL
407-909-3388

HiFi Buys
Atlanta, GA
770-931-0606

★ **Modus AV**
Suwanee, GA
404-471-3779

★ **Luminaire Smart Homes & Theater**
Boise, ID
208-781-8301

★ **Holm Audio**
Woodridge, IL
630-663-1298

Vision & Security Technology
Indianapolis, IN
877-546-8279

Tech Hifi
Hanson, MA
781-293-2860

Gramophone
Columbia, MD
410-381-2100

Gramophone
Timonium, MD
410-308-1650

★ **The Audio Hunters**
Simpsonville, MD
301-848-9700

★ **Stereoland**
Bloomington, MN
952-829-9700

★ **Stereo Stereo**
Warrendale, PA
724-719-2330

★ **Audio Advice**
Raleigh, NC
919-881-2005

★ **Audio Advice**
Pineville, NC
704-821-4510

★ **Rein's Audio Video Therapy**
Nashua, NH
603-888-9777

★ **Electronics Expo**
Wayne, NJ
973-785-1112

Woodbridge Stereo
Woodbridge, NJ
732-636-7777

★ **Hippo's HiFi**
Albany, NY
518-482-1864

★ **Genesis Audio**
Gahanna, OH
614-939-0802

Pure AV
Akron, OH
330-907-9970

The Groove - A Smart Spaces Experience
Oklahoma, OK
405-752-1115

★ **Quest for Sound**
Bensalem, PA
215-953-9099

Home Definition
Sioux Falls, SD
605-335-3776

★ **Origin HiFi**
Austin, TX
737-787-4434

★ **IQ Home Entertainment**
Fairfax, VA
703-218-9855

Platinum Micro Electronics
Manassas, VA
703-368-4584

High Note Audio
Tacoma, WA
253-465-9544

Hawthorne Stereo
Seattle, WA
206-522-9609

★ **Olson's Hi-Fi**
Lynnwood, WA
206-462-5227

★ **Sound World**
Appleton, WI
920-733-8539

★ = Elite Dealer

Scan and find a dealer near you.

MAGIC

THE FIRST HYBRID IN THE WORLD WORTHY OF THE NAME *PRIMALUNA*

IT'S NOT REALLY MAGIC, IT'S PARTS AND ENGINEERING.
STILL, WE WON'T TELL YOUR EARS IF YOU DON'T.

"SHEER GENIUS. PRIMALUNA HAS DONE A BETTER JOB OF COMBINING TUBES AND TRANSISTORS ON ONE CHASSIS THAN ANYTHING WE'VE COME ACROSS."

JEFF DORGAY, TONE MAGAZINE

PrimaLuna®

EVO 300 HYBRID INTEGRATED AMPLIFIER

A WORLD CLASS TUBE PREAMP AND SOLID-STATE AMP IN ONE CHASSIS

LEARN MORE. PRIMALUNA-USA.COM

DISTRIBUTED IN THE AMERICAS BY HARMONIA DISTRIBUTION | HARMONIADISTRIBUTION.COM

GRAMOPHONE DREAMS

BY HERB REICHERT

THIS ISSUE: The dCS Lina stack, DAC, Master Clock, and Headphone Amplifier.

The Lina chronicles

I was at least 40' away when I spied my first dCS Lina stack at CanJam.

It was black, sitting conspicuously on a table emitting a strong *Space Odyssey* Monolith vibe. I can't remember which headphones I used, but I do remember how good it felt to face the stack and experience its startling clarity, showing off the bass end of a piano keyboard with a force I could feel in my shoulders. That impactful piano bass plus the stack's matte-finish, neo-Brutalist façade, and feels-like-cashmere volume control, made a strong first impression.

We all know everything sounds like what it looks like—right? It also sounds like what it's made of, who made it, and how much it costs. Well, the $13,500 Lina D/A converter could hardly *look* more different or *feel* or *cost* more different than the $46,500 dCS Vivaldi. The Lina is dCS's lowest priced streaming DAC, so it *has* to sound less good than my long-term reference Bartók, or the Bartók Apex I reviewed in GD75. That's just logical, right?

I also wondered, what can the Lina DAC do that my beloved $6500 Denafrips Terminator Plus D/A converter, or the excitement-inducing $3098 KTE Edition of HoloAudio's Spring 3, cannot do?

First listen

My quest to address those questions began with the first recording I streamed through the Lina via its Mosaic control app: the soundtrack to the 2023 movie *Poor Things*, which I have not yet seen. When I'm looking forward to a new film, as I am to Yorgos Lanthimos's latest, I read everything I can about it, watch the trailer, and learn the plot. I might even go to YouTube and watch talk show appearances featuring the movie's principal actors. Always, when I am extra excited about a film, I buy or stream the soundtrack. If I hate the soundtrack, I may never watch the film. If I like the soundtrack, I might play it over and over until I have it almost memorized. That way, when I see the film, I can watch how its sound and visuals are woven together and get a sense of how the director wanted the audience to respond emotionally to the narrative.

The chief reason I am stoked for *Poor Things* is that it stars three talented actors with strong faces and dynamic personas: Emma Stone, Mark Ruffalo, and Willem Dafoe. And now, after playing Jerskin Fendrix's soundtrack a half-dozen times through the dCS Lina DAC, I am fascinated by how most of the sounds, on most of the tracks, appear to suggest the dynamic real-time thinking of Emma Stone's character Bella. Each scene's sounds flow like quick-moving thoughts, making me feel like I am observing Bella's mind operating just behind her big, wild eyes.

With the Lina DAC, the *Poor Things* soundtrack demonstrated how easily music can communicate the *inner experience of living*—way better than words, which seem better suited to explaining ideas than describing sensations or feelings.

Nevertheless, the effect of swapping in a new DAC is simple to assess: I just notice what I notice that I didn't notice before, with the old DAC. In this case, my first impression with the Lina playing the *Poor Things* soundtrack (24/48 FLAC, Sony-Milan/Qobuz) was how spatially expansive and physically present it made the soundtrack sound, and how big-screen it made the soundspace "look."

During my first day of listening, I wrote "feels real" in my notes. What I meant by that (I think) was *unimpinged*. The Lina was offering an extraordinarily clear view of

the "reality" of the recording.

My goal with these Lina DAC auditions was to keep what it drives as simple and familiar as possible. For the first part, I connected the Lina server-converter to HoloAudio's Serene preamplifier sourcing the Parasound A 21+ power amp driving my Falcon Gold Badge speakers, with all Cardas Clear Beyond wire. For the second part, I double-checked my observations from the first part using the Lina headphone amplifier with a variety of top-tier planar magnetic headphones.

Watching movies in theaters is exciting because theater sound is engineered to power a big room. Audiophile sound is mostly faint clouds hovering between boxes.

A movie theater is a voluminous dark space where, when the movie's going, every air molecule is charged with high-powered sound energy. You can feel movie sound on your skin and bones, even in the quiet passages. I presume the multitrack version of the soundtrack I hear in the theater is less dynamically compressed than the 24/96 "domestic" version I stream at home.

When I played the *Poor Things* soundtrack through the Lina and my LS3/5a's, it seemed that some amount of the uncompressed theater version was coming through. In my system, the Lina DAC didn't just kick out some cinema-scale dynamics; it made the *Poor Things* soundtrack sound bigger—much bigger—and more room-filling than it was with my NOS DACs, like it charged the air more.

As it expressed those *Poor Things* dynamics, the Lina DAC did not sound mechanical, hard, or gray. Nor did it overdamp, discard, or dull reverberant data I knew from previous listenings was on the recording.

What the Lina did best was expose subtlety, which made listening a fuller, more complex experience, exposing the different sonics of the various tracks of my Walter Greisking Debussy piano collection, which were recorded at different times with different equipment, possibly in different places. The Lina revealed this clearly by reproducing the subtlest levels of reverb in what felt like their proper proportions.

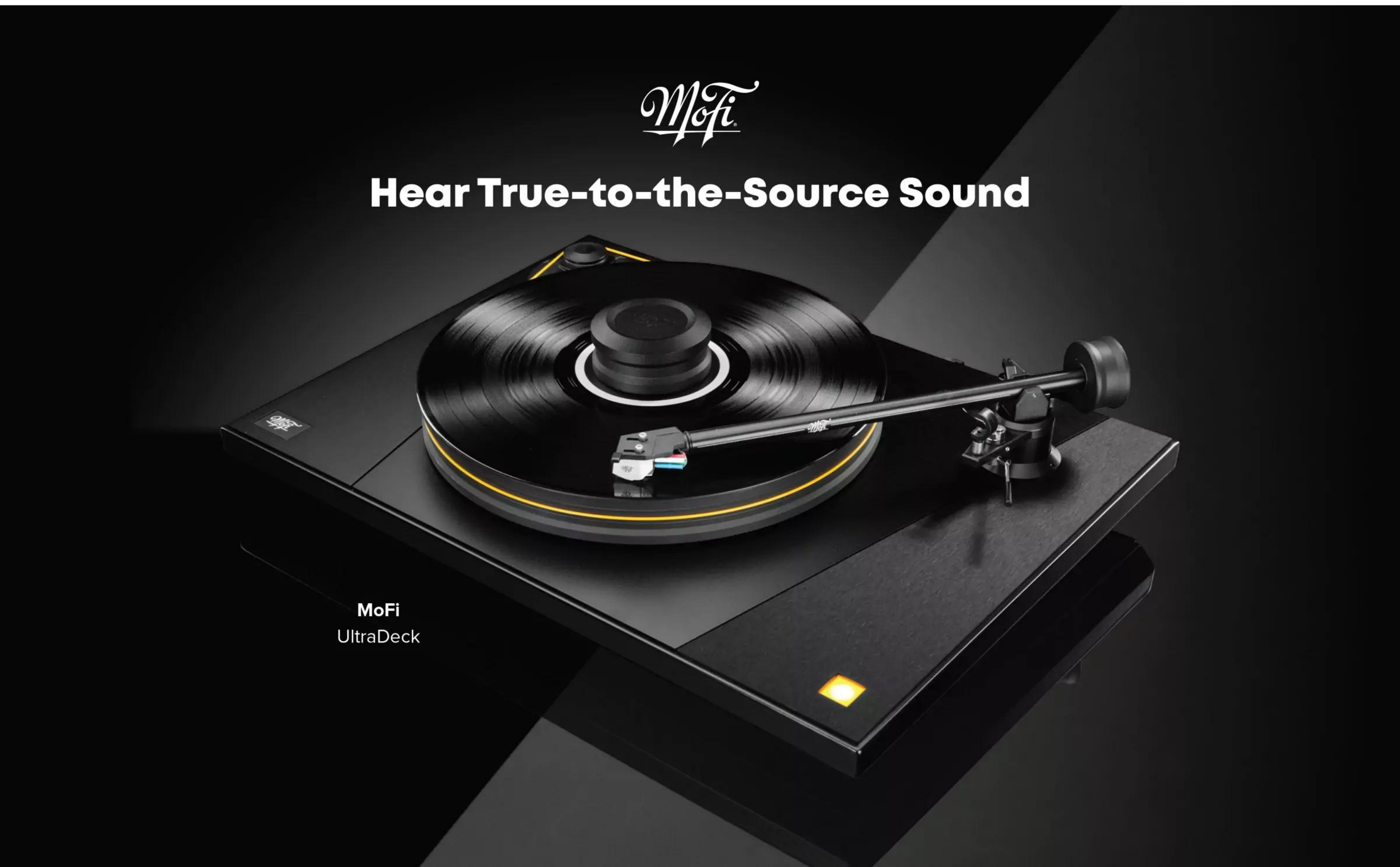
As David Chesky says, "recordings are all about the 'verb!" When recorded reverb is exaggerated or curtailed, it either blurs, fuzzes, or oversharpens the sound, making very different recordings sound very much alike. That's not high fidelity.

Compared to the Bartók Apex, the Lina's sound (without the Master Clock) had a slightly different textural quality, not coarser or finer grained but as though I was viewing performers under a different quality of light. The Lina's light felt slightly more brilliant than I remember with the Apex and maybe 3° cooler. I rather enjoyed this Lina light—which changed considerably when I changed the Lina's Filter and Mapper settings as described below.

Lina tech

The Lina DAC 2.0 DAC came in a thick, easy-to-lift (14" × 20" × 11") cardboard box with no tape at all; its end flaps were sealed with industrial-grade rubber cement. On its broadest side, it says "dCS only the music." On its smaller side, it says "Made in the United Kingdom." To open the Lina's box, I had to grasp a glued end flap on both sides with the fingertips of both hands and pull briskly upwards. More fun for me than slitting plastic tape with a box cutter.

Snuggled inside the corrugated outer box was a luxurious-looking lidded box—the kind women's hats come in, made of black, fabric-textured cardboard with a big, silver-inked dCS logo and tagline. Under this lid, I found a black, synthetic-leather envelope containing a thick booklet of startup instructions and a clear plastic envelope holding a soft cleaning cloth for the Lina's display. Under that partition, in



a cloth bag, was the attractively proportioned Lina DAC, which measures 4.8" high × 8.66" wide × 13.3" deep and weighs 16.3lb.

The menu of digital inputs on today's DACs can be unpredictable. But I like it when I get all the options the Lina offers: two AES3 inputs, two electrical S/PDIF (one via BNC, one via RCA), one TosLink, one USB Type B, and one USB Type A, plus Ethernet (LAN). Both balanced (XLR) and unbalanced (RCA) analog outputs are provided. There are also two Word Clock inputs, two "Power Link" connectors via RJ45, an IEC connection, and a rocker switch for main power.

The Lina's easy-on-the-eye display sits above four tiny white-light touch buttons that occupy the center third of a neat, smartly designed touch panel. The panel's glossy surface responded well to my greasy artist fingers and required frequent application of the included display cleaning cloth.

For these auditions, I connected the Lina DAC/server directly to my router via its LAN input and downloaded dCS's Mosaic network control and streaming app. So far, in my diverse DAC auditions, I've found dCS data delivery, operated by the Mosaic app, to result in music with what feels like a purer transparency than I get from my Mac mini or Roon Nucleus+. Using Mosaic with Qobuz felt very minimalist.

What's inside

During a phone conversation with John Giolas, dCS's vice president of sales and marketing, I asked him to explain how the Lina DAC is technologically different than the Bartók converters I'm familiar with. He responded that in designing the Lina, "dCS applied no limitations." They told their engineers to do "everything they wanted without compromise" to optimize sonic performance within the Lina's form factor and at the Lina's price point.

John said that the Lina DAC is built around the Ring DAC in the Vivaldi with a slightly different implementation, and that the Lina employs the latest "flex-rigid" circuit board topology, like the Lina headphone amp I reviewed in GD82. As far as he knew, John said, these Lina components were the "first audiophile products" to use this cell technology, derived from phones and cameras, which reduces noise by eliminating the point-to-point wiring traditionally used to connect separate circuit board–mounted subassemblies. When I asked about the Lina's power supply and transformer, he responded, "Same as Bartók!"[1]

I reviewed the Lina headphone amp separately[2] because in this report I want to feature the Lina DAC as a stand-alone two-channel audiophile product, to see if it is capable of going head-to-head with any other converter in its price class.

Close listening

My first night of close listening with the Lina was highlighted by a CD transported from my Onkyo C-7030 player, connected via S/PDIF on RCA: Walter Gieseking playing the *Complete Piano Music of Maurice Ravel* (NCA CD LC 12281). On page 546 in his *Essential Canon of Classical Music* (North Point Press), David Dubal described Ravel as "an elegant Apollonian" and an "exquisite jeweler," but for me Ravel is a more distinctly modernist extrapolation of Debussy's dreamier, more sensation-based creations. In *Gaspard de la nuit*, Ravel's three poems for piano, I experienced death and the abyss, a hangman standing on a gallows, plus devilish imps dancing on glistening water under sparkling lights—and all I had to do was press Play, close my eyes, and listen. The dCS Lina and Walter

1 See pcbway.com/pcb_prototype/What_is_a_Rigid_Flex_PCBs.html.

2. See Gramophone Dreams in *Stereophile*'s March issue, at bit.ly/March2024Dreams.

Rega
Planar 6

Fender x MoFi
PrecisionDeck

Pro-Ject
Debut Carbon EVO

Marantz
TT-15

Clearaudio
Concept Air

VPI
2022 Classic Signature

musicdirect®

312-433-0200

CHECK OUT OUR NEW CATALOG!

Call for a free copy

PD-191A

The Classic Turntable Reborn

LUXMAN

LuxmanAmerica.com

Gieseking played these Ravel sound poems with brilliance and light-saber precision, especially on the second poem, "Le Gibet" ("The gallows"); the metronomic ticking of the last seconds of the prisoner's life was riveting and bell-clear. By the end of this 5:48 track, it was obvious that the Lina was presenting Gieseking's Ravel with more corporality and stronger forward drive than I get from the HoloAudio May KTE or the Denafrips Terminator Plus. The bass and treble ends of Gieseking's keyboard were denser and more energized than with the May or Terminator DACs.

On *Gaspard de la nuit*'s last movement, "Scarbo," the Lina exposed Gieseking's small-note mastery of Ravel's devilish-to-play composition. The Lina sorted Scarbo in a manner that made its tiniest parts more observable and comprehensible, something this composition requires to be enjoyable.

After spending a few days in the vision-inducing realms of Debussy and Ravel, I pressed further into the 20th century with the music of Alexander Scriabin via the album *Alexander Scriabin: The Poem of Ecstasy, Op.54, Prometheus, Op.60 & Piano Sonata No. 5, Op.53* (24/96 FLAC, BIS/Qobuz), with the Singapore Symphony Orchestra conducted by Lan Shui and with Yevgeny Sudbin on piano. I searched, as I usually do when listening to Scriabin, for what Scriabin biographer Arthur Eaglefield Hull called the "mystic chord" and scholar Leonid Sabaneyev later called the "Prometheus chord," a chord or note sequence on which the mystical-minded Scriabin based some of his later works.[3] As I listened, I imagined this chord to be some form of shape-shifting tone arrangement used to suggest cosmic realms. Using the tone-precise Lina to study *The Poem of Fire*, I never found sounds I could point to and say, "There's the Prometheus chord!," but I did notice ordered arrangements of reverberant, quasi-atmospheric sounds I felt alluded to higher realms.

What the Lina did that aided my search most was make me feel confident that I was glimpsing all, or nearly all, the musical information buried in the *Poem of Fire* file.

Up to this point, I'd been using the Lina DAC set up as it came from the box: Upsampling: DXD; Filter: F1; Mapper: 1; DSD Filter: F1; Crossfeed: Off; Max output: 2V. After a week of listening, I decided to try some other filters. I asked Giolas which settings he would recommend. He suggested some different Filter settings but emphasized the need to try Mapper 3; this change was easy to make with the Mosaic app installed on my iPad.

Per John's suggestions, my new settings

At no previous time had my LS3/5a's sounded this transparent or awake.

were Upsampling: DXD; Filter: 3; Mapper 3; DSD Filter: 4 (DSD ×2). With those new settings, the sound was immediately, recognizably different, but *how* it was different I couldn't say without further listening.

At one point during that further listening, I felt the urge to play my cherished three-CD set of Samson François playing Debussy's piano music. These Warner Classics discs (50999 638754 2 3) are "24-bit remastered," and even through my iPhone, they come across as thrilling adventures. But now, with the Lina driven by the coaxial output of my almost-free Onkyo C-7030 CD player, they were more thrilling than ever because they sounded realistically *solid*. The Onkyo-Lina combo displayed an extra-ordinary amount of note-pushing force from the piano keyboard, taking my Debussy listening to the next level.

I've discussed a lot of piano music because the Lina DAC has a special knack for making pianos sound like large, dense structures with a tremendously powerful output, even when playing quietly. This facet of the Lina's performance suggests it's delivering musical information that my other DACs are not.

My listening to the Lina led me to ask, not for the first time: Why do CDs sound more *there* than streams? In my system, the acuter, denser presentation of CDs makes most streamed 16/44.1 files sound blurry and virtual. I'm using a $250 CD player as a transport feeding the Lina's S/PDIF input and marveling at the obvious, qualitative difference between CD sound and streaming sound. Which one's better? This is an aesthetic-sensibility question you must answer for yourself. What I know is, I just ordered more CDs.

What makes analog master tapes so mesmerizing is how they present recordings with what feels like complete coherence, as if every magnetic particle is being vacuumed off the surface of the tape. In a similar fashion, the Lina presented recordings with what felt like complete digital coherence. With a teaspoon of analog salt.

Lina DAC and headphone amp

I was enjoying how clear, solid, and expansive the Lina DAC sounded playing through my Falcons when I got to wondering if those impressions would be corroborated at higher resolutions using the Lina headphone amp ($9750; see footnote 2) powering a few of the world's finest transducers.

I started with Meze Audio's 32 ohm, 101dB/mW Elite headphones playing the *Poor Things* soundtrack via Qobuz and the dCS Mosaic app. What I mean is, micro and macro dynamics were many times enhanced compared to my Falcons. What I wrote earlier about this recording was now doubly true: "some amount of the uncompressed theater version was coming

3 Scholars disagree about the importance of this chord in Scriabin's compositions.

through." This Lina-Meze combo threw so much clarity and live energy into the sound that I texted my friend Sphere and told him, "The Lina is amazing. I feel like I'm getting everything!"

The Lina Master Clock

All the above observations were made *without* the Lina Master Clock ($7750). Because sequence is everything, I took my time, waiting to install the clock until my head was fully in tune with the sound character of the basic Lina DAC. And then I put it in.

Sixty seconds into the first track, I remarked to myself, "Well dang, *that* sounds real nice!" I smiled. I was responding to an easily noticeable increase in vividosity, dimensionality, and transparency. It was not a loud change, but neither was it subtle. The clock-enhanced repro seemed distinctly calmer and sharper focused, with smaller, more clearly outlined molecules of sound. With the clock, I felt the music's energy more because it occupied a larger portion of my room.

The Lina DAC has a special knack for making pianos sound like large, dense structures with a tremendously powerful output, even when playing quietly.

My Falcons have never sounded cleaner, bigger, or less inhibited than they did playing Andris Nelsons conducting the Boston Symphony Orchestra on *Dmitri Shostakovich: Symphonies Nos. 2, 3, 12, and 13* (24/96 FLAC, Deutsche Grammophon/Qobuz). At no previous time had my LS3/5a's sounded this transparent or awake. More than a few times, this demonstration-quality recording made me jump with surprise; I was startled by sudden loud sounds. The last time a digital recording startled me, I was using Mola Mola's Tambaqui DAC, which specializes in push and jump factor. The Tambaqui delivered a high measure of clarity and could pound and dance and genuinely satisfy, but it could not do nuanced tone or fine lighting like the Lina, which made me constantly aware of those things. In my system, the Lina specialized in subtlety and superb left-brain/right-brain balance.

Besides more finely formed detail and less-fettered dynamics, the clock-locked Lina projected a more evenly lit, cloud-free space than it did without the Master Clock. The Lina's clock-enhanced spaciousness seemed similar (visually and tactilely) to what I routinely experience with the Denafrips Terminator Plus, except in my system, the Denafrips's space is sparkling deep-water moody while the Lina's space was brighter, more straightforward, and more intensely energized.

I judge the quality of digital playback not by its resolution but by its density, rhythmic force, and the beauty of its space and light. The Lina excelled at all three.

Comparing the Lina to HoloAudio's Spring 3 DAC was difficult, because the Spring 3 has its own distinct *vivo*, PRaT, and jump factor that I find quite engaging. Every time I put the Spring 3 in my big system, it runs over, jumps up, and greets me like a just-washed dog. It plays clear, fleet of foot, and vigorous. But it can't match the Kodachrome transparency of its more costly sibling, the HoloAudio May DAC, or the sparkling depths of the Denafrips space, or the solid unmitigated realism of the Lina. With the Lina, I always felt I was getting the complete picture, presented with absolute authority. And that's something I'd pay extra for.

The wrap

The chief thing I've learned from reviewing is how the best audio products are the ones that achieve *long-term relevance*. It's not for nothing that the Klipschorn, Denon DL-103, Technics SL-1200, the Koetsu, the Ongaku, the Linn LP-12, and several versions of the BBC LS3/5a are still in production.

If any digital products that require periodic software upgrades could ever pass the long-term relevance test, it would be Data Conversion System's Lina Stack. The Lina 2.0 DAC, Master Clock, and headphone amplifier feel like they are operating on a performance plateau that will not easily or quickly be surpassed, which is what the above-mentioned products felt like when they were introduced.

The first audiophile "stack" I ever used was the Marantz Model 9 amplifier supporting the matching Model 7 preamp, crowned by the nearly peerless 10B tuner. Like this Lina tower with its fancy DAC, that Marantz stack performed at a higher level than its contemporaries. Though long out of production, the Marantz stack has held its status and value for 60 years because it still looks amazing and sounds amazing, and because Saul Marantz, Sid Smith, and Dick Sequerra were engineering leaders with a shared long-term vision. I believe the minds at dCS are operating with a similar long-term vision.

My recommendation: get ye to a dealer or audio show and face the stack. ■

CONTACTS

dCS (Data Conversion Systems), Ltd.,
Unit 1, Buckingway Business Park,
Anderson Rd., Swavesey, Cambridge
CB24 4AE, England, UK.
US distributor:

Data Conversion Systems Americas, LLC,
PNC Bank Bldg.,
300 Delaware Ave., Suite 210,
Wilmington, DE 19801.
Tel: (302) 473-9050.
Web: dcsaudio.com.

Bass. Refined.

Precision engineered low-frequency.

Introducing the PSB SubSeries BP8 Powered Subwoofer—an innovation in precision-engineered bass. Proprietary bipolar dual 8" drivers, 500 watts of premium nCore® amplification, and advanced isolation features work together to deliver a unmatched level of detail with minimum distortion. Elevate your movie, music, and gaming experiences with deep, powerful bass and unmatched accuracy.

psbspeakers.com

HEAR US OUT!

AUDITION ALL OF THESE PRODUCTS AND MORE IN THE EAR GEAR EXPO AT AXPONA 2024

HIFIMAN

Susvara

Planar Magnetic Headphones

$6000

This flagship uses a special magnet design that is acoustically transparent. Along with the low mass driver, it offers extreme dynamics with tremendously low distortion.

PATHOS ACOUSTICS

InPol Ear

Headphone Amplifier

from ***$5195*** *(pictured)*

A hybrid circuit combines two Electro-Harmonix 6922s with patented InPol technology, bringing pure class-A performance to this Italian beauty.

FOCAL

Utopia 2022

Open-Back Dynamic Headphones

$4999

With a new look and an upgraded voice coil, pure beryllium drivers offer speed and detail. Materials include carbon fiber and lambskin. Made in France.

PRIMALUNA

EVO 100

Integrated / Headphone Amplifier

$2795

The 'headphone out' is no afterthought: the entire amp drives your headphones. Compare PrimaLuna construction to any other brand, at any price. You'll be amazed.

MEZE AUDIO

Empyrean II

Open-Back Headphones

$2999

Leather, carbon fiber, and CNC'd aluminum come together in this celebrated hybrid planar-magnetic that is designed and handcrafted in Romania.

PATHOS ACOUSTICS

Aurium

Headphone Amplifier

$1595

Pure class-A with a 6922 input stage coupled with a MOSFET output stage in a thick aluminum chassis. Designed and manufactured in Italy.

ABYSS

Diana MR

Headphones

$2995

The world's thinnest and lightest planar, sculpted from aircraft grade aluminum, and designed for near flat frequency response.

FELIKS AUDIO

Envy

Headphone Amplifier

from ***$7995*** *(pictured)*

A class-A single-ended transformer-coupled, balanced headphone amplifier, powered by 300B tubes. Hand-crafted in Poland.

T+A ELEKTROAKUSTIK

Solitaire T

Closed Back Headphones

$1600

German engineering combines audiophile sound and mobile wireless convenience in this sleek pair of comfortable headphones.

EXPERT ADVICE. EXCLUSIVE DEALS. NEW & USED.

UPSCALEAUDIO.COM 909.931.9686

BRILLIANT CORNERS

BY ALEX HALBERSTADT

THIS ISSUE: Using the Degritter Mark II ultrasonic record-cleaning machine and visiting Tribeca's All Blues.

Record cleaning and listening spaces

I've always been a city dweller and can't lay claim to having owned boats, riding mowers, shotguns, basement refrigerators, golf clubs, or even patio furniture. When I moved to a loft from an apartment with a tiny backyard some 13 years ago, I even had to give up my Weber grill. This geographical fact has kept my possessions streamlined. My favorites include a handful of old waxed cotton coats, a couple dozen leather boots and shoes, a few mechanical watches, my Garrard 301 turntable, a roomful of books, and rather a lot of art, much of it made by friends. But without a doubt my fondest possessions are my records. At last count they numbered around 3500. Of course they are beautiful, both as objects and as conduits for music. But what I enjoy even more is the fact that I'm not really their owner, merely a custodian: Most of the records belonged to others before I bought them, and after I'm gone they'll find new owners who'll hopefully appreciate them as much as I do. So I feel I owe it to all of us to keep them in decent condition.

For years, that meant scrubbing and vacuuming them with a VPI HW-16.5 record-cleaning machine. My partner gave one to me for my birthday about 25 years ago. I recall being quite excited about it. It cost around $400 (it sells for two-and-a-half times that today) and, for better or worse, it outlasted my partner. It has also become the best-selling machine of its kind, found in countless record shops, music archives, and homes. The VPI is sturdy enough to last forever, and more importantly, it works. God bless it.

To be completely honest, though, my relationship with the VPI has been a bit rocky. Over the years I've gone on record-cleaning frenzies, vacuuming my way through a couple of dozen LPs at a time, but in between, the machine has lingered on its shelf, sometimes for many months. The reason is simple: While it works, it's not a whole lot of fun to use. Not difficult by any means, just loud and messy. There's the squirting of cleaning fluid and then distilled water onto the record surfaces (the rinse cycle is essential!), the vigorous hand brushing, the vacuuming loud enough to scare away cats and smaller humans, the mopping up of spills, and finally the uncomfortably biomorphic task of emptying the dirty fluid from the plastic tube protruding from the machine's posterior.

So when I began reading about machines that use high-frequency sound waves to blast records with tiny imploding bubbles in a process called cavitation, I was intrigued. (This process has been covered in so much detail elsewhere that I will admit to coming to the party late and say no more about it.) Ultrasonic machines are reputed to be quieter than their vacuum counterparts and to clean records more thoroughly. And some offer a fully automatic cleaning cycle, with no scrubbing required. Of course most are also considerably more expensive. For years I resisted the temptation and added clutter, believing that my vacuum machine was entirely, perfectly fine. But eventually, as it often does, my curiosity got the better of me, and I dispatched an email to the distant land of Estonia, located on the cool and amber dotted shores of the Baltic Sea. And by and by, the Degritter Mark II ultrasonic record cleaning machine ($3280) made its way to my home in Brooklyn.

On the third page of the Degritter's thorough and genuinely informative user manual, there's a photo I think is meant to capture the lifestyle promised by this novel device. It shows a middle-aged man in a metallic-gray suit inside a room filled with Scandinavian midcentury furniture. He sprawls awkwardly in a chair holding a snifter of what I can only presume is an old cognac while next to him, on a sideboard beside a potted plant, a Degritter is cleaning a record. The man's face is fixed in an expression somewhere between satisfaction and cruelty; for some reason, the whole scene is bathed in blue light. While it's easy to poke fun at this rather artless photo, the truth is that for the past several weeks, the Degritter has been sitting on *my* sideboard beside *my* potted plants and *my* chair, in which I've sprawled during

record-cleaning cycles with a look of distinct, and probably cruel, satisfaction.

One reason I've left the Degritter in plain sight of nonaudiophile visitors—something it never occurred to me to do with the VPI—is that it's really nice to look at. About the size of toaster oven, made of alloy rather than plastic, it sports a pleasantly sleek, matte-black exterior undisturbed by protruding hoses or other unseemly appurtenances. The only break in its form is its name, set in a white typeface of the kind you might spot over the entrance to a retro diner.

Better yet, the Degritter cleans records from beginning to end with a single push of a button while displaying the progress on a round, smart-looking LED screen, and it does this without emitting any painfully loud or jarring sounds. I have to admit that I enjoy watching the record rotate purposefully in the machine while doing something entirely unrelated, like reading or plotting revenge or composing emails to the Internal Revenue Service.

For those wondering about how the Mark II differs from the original Degritter, reviewed in these pages in 2020,[1] the most significant among the various refinements is the addition of Pulse Mode, which replaces a steady-state ultrasonic frequency with

short, higher-energy pulses. The company claims that this makes the machine more effective and lowers its power consumption.

Nothing about using the Degritter Mark II feels kludgy or illogical—it struck me as a product in which the kinks had been smoothed out. Still, the Degritter isn't entirely free of fuss. A full cleaning—you can opt for one to four revolutions plus an optional presoak cycle—takes 11 minutes, considerably longer than a cleaning in the VPI. Part of this is the roughly three-minute drying cycle, which sounds about as loud as a hair dryer. After every 50 records, the filter—which is roughly the size of a single piece of rigatoni—must be cleaned, as does the interior of the machine itself. Failure to do so voids the warranty. Also, the water tank must be filled with a considerable quantity of distilled water and changed every one to two weeks to prevent bacterial growth.

Somewhat annoyingly, when using the machine often, I find that I need to top up the tank every day. And when I clean more than two or three records in a row, the machine goes into a cooling cycle to prevent the water from getting too hot and cooking my LPs, which adds several minutes to the cleaning time. Finally, I wonder about the utility of being able to select fewer than four revolutions—maybe I'm compulsive, but I fail to see the point of using *less* cleaning than the machine can offer and always opt for the full cycle.

But all this fine print hardly matters if the machine doesn't make your records sound better. Which the Degritter does, though in a different manner than I expected. I'd assumed it would clean records like the VPI, only more so. What I discovered is that it effects a whole other type of cleanliness.

Like most vacuum machines, the VPI is

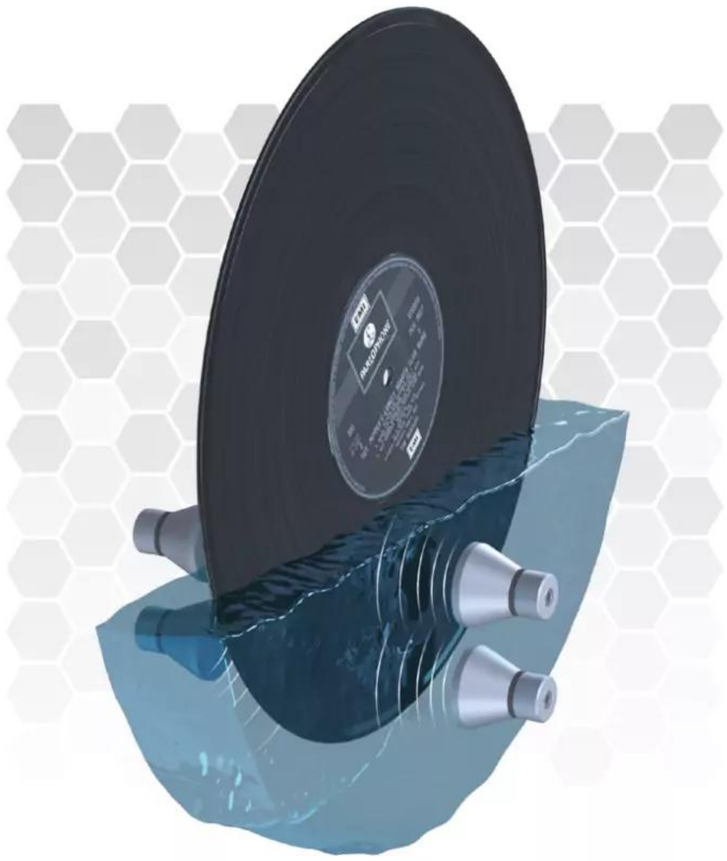
We are the world's foremost experts on system matching

ABYSS
ACOUSTECH ELECTRONICS
ACOUSTIC REVIVE
ACOUSTIC SIGNATURE
ACOUSTIC SYSTEM
ACOUSTIC ZEN
ACOUSTICAL SYSTEMS
ACROLINK
AESTHETIX
AIR TIGHT
ALLNIC/ZL TECHNOLOGIES
ALPHA CORE GOERTZ
ALPHA DESIGN LABS
ANALOGMAGIK
ANALOGUE PRODUCTION
ANALYSIS PLUS
AUDIENCE
AUDIO DESK SYSTEME
AUDIO MAGIC
AUDIO REPLAS
AUDIOQUEST
AUDIOSHIELD
BACKERT LABS
BDR SOUND ENHANCEMENT
BELLA SOUND
BLACK CAT CABLE
BLUE HORIZON
BOB'S DEVICES
BUTCHER BLOCK ACOUSTICS
BYBEE
CABLE TOWER
CARDAS AUDIO
CHANG LIGHTSPEED
CHORD COMPANY
CHORD ELECTRONICS
CLEARAUDIO
CONTACT ENHANCER
CRYSTAL CABLE
DAN CLARK AUDIO
DH LABS SILVER SONIC
DS AUDIO
DYNAMIQUE AUDIO
DYNAVECTOR
ELEVEN XI AUDIO
ELROD POWER SYSTEMS
ENGLISH ELECTRIC
ENTREQ
ESP ESSENTIAL SOUND
EXTREME PHONO
FEICKERT
FERRUM
FINITE ELEMENTE
FOCAL
FOSGATE
FURUTECH
GINGKO AUDIO
GOLD NOTE
GOLDEN SOUND
GRADO LABS
GRAHAM ENGINEERING
GUTWIRE
HANA CARTRIDGES
HARBETH
HARMONIC TECHNOLOGY
HART AUDIO
HELIUS DESIGNS
HERBIE'S AUDIO LAB
HRS HARMONIC RESOLUTION
IFI AUDIO
IKEDA
ISOACOUSTICS INC
ISOCLEAN POWER
ISOTEK
JORMA DESIGN
JPS LABS
KAB
KIMBER KABLE
KOETSU
KR AUDIO
L' ART DU SON
LAB12
LAMM INDUSTRIES
LEHMANN AUDIO
LESSLOSS AUDIO
LITTLE FWEND
LYRA
MAGNAN AUDIO CABLES
MARIGO LAB
MEZE HEADPHONES
MOBILE FIDELITY MOFI
MUSICAL SURROUNDINGS
NEOTECH
NITTY GRITTY
NORDOST
NUPRIME AUDIO
ONZOW
ORTOFON
OYAIDE
PHASEMATION
PRANAWIRE
PRIMARE
PURE VINYL
PURIST AUDIO DESIGN
QUADRASPIRE
QUANTUM PHYSICS
REGA
REL ACOUSTICS
ROGUE AUDIO
RSX TECHNOLOGIES
SENNHEISER
SHAKTI INNOVATIONS
SHELTER
SHUNYATA RESEARCH
SILTECH CABLES
SNAKE RIVER AUDIO
SOLIDSTEEL
SOUND ANCHORS
SOUNDSMITH
STEALTH AUDIO
STEINMUSIC
STILLPOINTS
STRAIGHT WIRE
SUMIKO
SUTHERLAND ENGINEERING
SYMPOSIUM ACOUSTICS
SYNERGISTIC RESEARCH
T+A ELEKTROAKUSTIK
TARA LABS
TARGET
THORENS
TONTRÄGER
TRI-PLANAR
VAN DEN HUL
VIBRAPOD COMPANY
VICOUSTIC
VOODOO CABLE
WARWICK ACOUSTICS
WATTGATE
WBT
WIREWORLD CABLE
WOLF AUDIO SYSTEMS
WYWIRES
XLO

particularly good at removing the really coarse schmutz that causes crackle, hiss, and popping during playback. It also does away with fingerprints and other surface marks (though of course no machine can remove scratches). After a vacuum cleaning, records play with noticeably less groove noise, especially of the most flagrant kind; the VPI makes them look and sound like they had gone through a car wash.

But when I first listened to familiar records after an ultrasonic cleaning in the Degritter, they sounded audibly *louder*, to the point where I had to turn the volume down by a decibel on the EM/IA remote autoformer to match the previous loudness level. What I heard was increased clarity: Musical textures sounded more forthright and explicit, tonal colors grew brighter and more saturated, and everything became easier to hear.

If you haven't experienced this ultrasonic effect, think about what happens to a centuries-old oil painting when it is being cleaned. Using a solvent, a conservator removes the top layer of varnish along with decades of dirt as well as smoke and other air pollutants, exposing the original paint. A conserved painting looks more detailed but also brighter and more colorful. This is,



essentially, what the Degritter does to your records. It removes a layer of sonic dullness, an entire membrane of crap I didn't know was there. The change I'm describing isn't going to make you drop your sandwich on the floor, but neither is it difficult to hear.

After running Milton Nascimento's self-titled debut from 1967 (Som Livre 403.6152) through the Degritter, I listened to its most famous track, "Travessia." A poem about the end of a love affair, it established 24-year-old Nascimento as a vital songwriter whose singular tenor and unearthly falsetto would come to be described as "a voz do Deus" (the voice of God). The strings in Luiz Eça's orchestral arrangement can sometimes come across as a bit indistinct and murky, but after the ultrasonic cleaning, they sounded clearer and fuller than I'd heard them. And the chords Nascimento strummed on his acoustic guitar got juicier.

In case you're curious, I did try the Degritter with new records. A wonderful-sounding 45rpm reissue of John Prine's self-titled debut (Analogue Productions AAPA 004-45), released to celebrate the 75th Anniversary of Atlantic Records, came through a cavitation bath with the same brightening I experienced with heavily played disks. It was as though someone had bumped up its contrast and saturation levels in Photoshop.

To see how the Degritter performed with seriously filthy records, I pulled out a copy of Pink Floyd's *The Wall* that I'd bought while in high school in the mid-1980s. I haven't listened to it in years and never cleaned it, and its grooves were covered with fingerprints and caked with enough Reagan-era gunk to send flurries of loud

1 See stereophile.com/content/analog-corner-305-degritter-record-cleaner-aidas-gala-gold-le-cartridge.

Cables Unlock Performance

Our Lending Library will prove that!

Our Audio Experts will guide you towards unlocking your audio system's full potential.
Our unique $3,000,000 Lending Library allows you to borrow fully burned-in cables and other products.
Hear our recommendations for yourself, at home, in your own system.

Finally hear all the music you've been missing!

215-862-4870 TheCableCo.com THE CABLE COMPANY Home of the only Audiophile Lending Library

crackling and popping through the speakers. *The Wall* was just as gross and crunchy as I remembered.

After it spent 11 minutes in the Degritter, I played side 2 again, the foghorn guitar and bombastic lyrics bringing back memories I'd rather not share. I heard the ultrasonic freshly-cleaned–window effect but was surprised to discover that the worst of the noise—presumably caused by the coarsest, stubbornest dirt—wasn't significantly reduced. The fingerprints were still visible, too.

So I went back to the trusty VPI and got to scrubbing. After vacuuming, I listened yet again. Now *The Wall* sounded noticeably less crunchy, and the fingerprints were gone, but it retained the clarity it had gained from the Degritter. All of which suggests that both machines have their uses and aren't totally redundant: For *really* dirty records, a pass through both machines is ideal. Is that a good enough reason to own two record cleaning machines? Don't look at me.

There's another meaningful difference between these machines that's worth mentioning. The VPI's tanklike durability and longevity is a result not only of solid construction and great aftermarket service but also of the machine's relative simplicity. Besides the motors that control suction and rotate the platter, there's not much inside it that can break. But a fully automatic ultrasonic machine like the Degritter is a *far* more complex proposition—essentially a computer filled with many moving parts and ... water. So Degritter's customer support, two-year warranty, and postwarranty service costs may be something to explore and consider, especially given the machine's nontrivial price.[2]

Should you buy a Degritter? Obviously I can't tell you. It is neither the most expensive nor the cheapest device of its kind, and I haven't compared it to other ultrasonic record cleaners. What I can say is that it works exceedingly well while being a pleasure to look at—and that I love using it. The gee-whiz factor of watching it clean my LPs isn't wearing off, and to me the sonic improvements it brings are commensurate with its price. I'm not looking forward even a little to sending it back to Estonia.

ALL BLUES

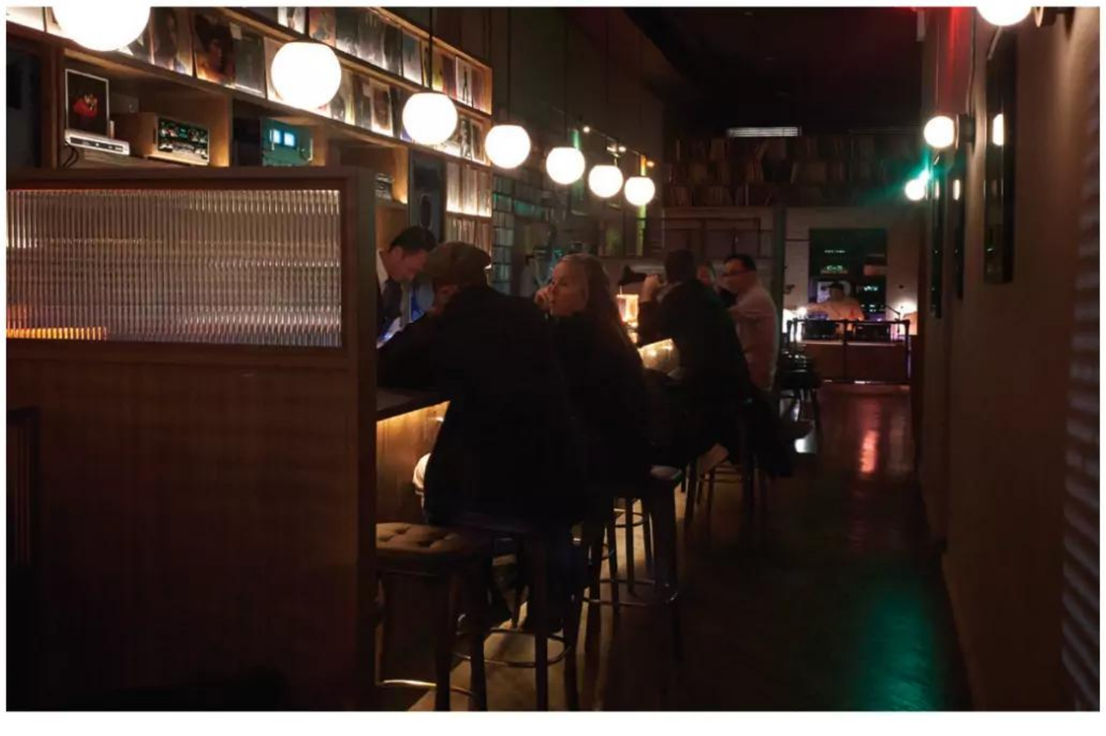
There's nothing New Yorkers like more than a secret. Private dinners for 20 that sell out in minutes, speakeasies you enter through a phonebooth, and record stores hidden on the upper floors of residential buildings are the kinds of things that make our hearts convulse a little faster. So when my friend Victor asked if I wanted to go to a new listening space with hardly any online presence and not even a sign, I said when and where. And that is how, on a recent night, we found ourselves looking for an unmarked door on a deserted street in Chinatown. It was Valentine's Day. Yeah, I know. Don't ask.

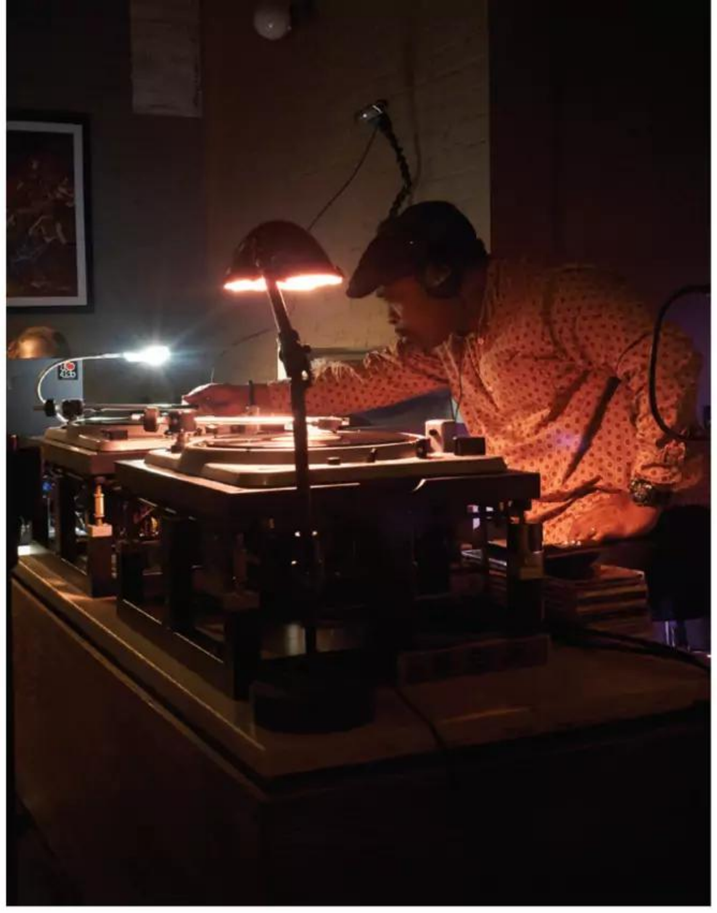
After we found the door and walked in, we were met by a tall, bald, powerfully built man in a devastating gray suit, who offered his hand and said, "Welcome, I'm Cornelius." He asked if we wanted a seat at the bar or in the "listening theater," explaining that in either location we were expected to be quiet. The friendly but decisive way in which Cornelius said this made it clear that putting up with people's noise wasn't his favorite activity. The front page of the menu reiterated this point at greater length.

The listening space, called All Blues, consisted of a long bar terminating in an open space with several rows of vintage leather-and-dark-wood seats facing a low stage. On the stage stood a JBL Paragon, a stereo speaker from the 1950s that resembles an old-timey radio console, flanked by two enormous JBL Hartsfield speakers from the same era. Off to the side was a deejay booth with two EMT 930 turntables, a mixer, and classic 1950s amplification from McIntosh and Marantz. Shelves holding thousands of records loomed above us. The walls were decorated with framed photographs of musicians; despite the scant lighting, I spotted Bob Marley, Bill Withers, and Cannonball Adderley.

The joint's middle-aged owner, a concert promoter from Tokyo named Yuji Fukushima, worked the booth. He greeted us warmly and explained that All Blues was his "passion project." It turned out that he was also the owner of a Soho clothing store named after another cut from Miles Davis's *Kind of Blue* LP, Blue in Green. I recalled visiting it months earlier not only because it carried my favorite brand of Japanese socks[3] but because it was the only clothing shop I'd visited with a sound system built around *Leave It to Beaver*–era Altec Voice of the Theater speakers, each about the size of a refrigerator.

In an earlier column about new listening spaces in New York,[4] I wrote about the ways these places differed from their Japanese counterparts in an effort to accommodate the musical and social habits of Americans. All Blues proved to be something else—an attempt to transplant a Tokyo-style jazz *kissa* in its purest guise to the US. The JBL, Marantz, and McIntosh gear from the golden age of American hi-fi could have come straight from a shop in Tokyo's Akihabara district. (In fact, some of it did: Fukushima told me that he'd bought the Paragon in Japan and had it shipped to New York.) The bar and kitchen serve Japanese fare, like the very respectable grilled eel that Victor and I enjoyed alongside whiskey-and-sake cocktails. Most importantly, the hands-on approach to encouraging a respectful noise level reminded me of Tokyo more than New York.





That said, All Blues differs from Japan's jazz *kissaten* in at least one important way: It happens to be a *funk kissa*. During our visit, as several couples strolled in after their prix fixe Valentine's Day dinners, Fukushima hunched over the handsome EMTs to play deep cuts by Harold Melvin & the Blue Notes, Earth Wind & Fire, Ray Parker Jr. (of *Ghostbusters* fame), and, in an unexpected flourish, Tracy Chapman's *Fast Car*, which is having a moment.

After taking a look around the place, I discovered that it could double as a vintage hi-fi museum. The sound above the bar was being pumped out by a pair of hefty JBL 4343B professional studio monitors from the early 1980s, their cornflower blue baffles flanking a row of rare Japanese whiskeys, while a petite sitting space near the entrance contained a JBL C46 Minigon—a kind of shrink-ray Paragon—as well as an ELP laser turntable and another EMT 930.

The four-channel sound in the listening theater—both the Paragon and the Hartsfields were on—was quite good, though perhaps a bit of a work in progress. But the experience of enjoying reproduced music in a comfortable, quiet space built for that very activity felt inspiring and, at least in New York, fairly unique. As my nerve endings were being unkinked by the dulcet voices of The Isley Brothers and a second cocktail, I felt grateful to live in a city weird enough to support a social and musical experiment like All Blues. The Alice-in-Wonderland sensation of being there made me inclined to believe almost anything, so when Cornelius mentioned that the bartender who mixed our drinks had spent 30 years singing with jazz and funk legend Roy Ayers, somehow I wasn't surprised.

After we bid Mr. Fukushima and the rest of the staff good night and thanked them effusively, Victor and I found ourselves back on the sidewalk. We wondered out loud how long this space, which seems to be undergoing an indefinite soft opening, would remain pleasantly under the radar of the novelty-addled denizens of New York's nightlife. Just then, an Uber pulled up in front of us and from it emerged a woman in a metallic silver spaghetti-strap dress and matching stilettos. Trailed by her date, she paced frantically past the featureless storefronts on Walker Street, using the flashlight in her iPhone to search for the right door. I wished her a happy Valentine's Day as I walked by. ■

2 Recently, a manufacturer of a popular ultrasonic record cleaner has been informing customers that it will no longer service their units, instead offering a discounted "upgrade path" to the current model. Caveat emptor.

3 RoToTo.

4 See bit.ly/CornerKissa.

CONTACTS

Degritter
Tel.: +372 5884 8839
Email: info@degritter.com

All Blues Musiquarium NYC
87 Walker St.
New York, NY 10013
Email: info@allbluesnyc.com
Web: allbluesnyc.com

The Goddess of Beauty, Passion, and Pleasure Inspires APHRODITE

Alta Audio presents, Aphrodite, a four-way floor-standing speaker that is the culmination of a long history focused on creating the most memorable stereo and multichannel listening environments.

"There comes a time in every reviewer's mind – do I like this enough to make it permanent in my system? The bass response, the level of detail, and resolution through the midrange in the [Alta Audio] Adams to me say yes."

–PIERO GABUCCI,
Secrets of Home Theater and High Fidelity

"Center imaging is strong, and they throw a large, lush soundstage that extends both vertically and horizontally beyond the speaker position."

–DR. STEVEN GOLD,
East Stroudsberg, PA (Alta Audio customer)

For further information, visit **altaspeakers.com**.

For dealer inquiries,
contact Nexus Audio Technologies at +1-781-775-5650.

Alta Audio™

SPIN DOCTOR

BY MICHAEL TREI

THIS ISSUE: The EMM Labs DS-EQ1 optical cartridge equalizer, Wand 14-4 turntable upgrades, and M•A Recordings inner record sleeves.

Of optics, wands, and M•A sleeves

"I think both moving coil and moving magnet cartridges are terrible." That's what legendary Canadian audio designer Ed Meitner told me when I asked about the pioneering transimpedance current drive phono stage he created for his Meitner PA6 preamp some 40 years ago.

Meitner has been designing innovative hi-fi gear for the pro and consumer audio markets for more than 50 years, but for most of the last 30, he has been best known for his work with high-resolution digital audio and DSD recording.[1] Despite this focus on digital—and despite that comment about the two leading phono cartridge technologies—deep in his heart, Ed still loves analog and has fond memories of the Kenwood optical cartridges from the 1970s, which I discussed in the April-issue Spin Doctor. So when Ed read that a company in Japan called DS Audio was bringing back an improved version of the optical cartridge using modern materials, he contacted designer Tetsuaki Aoyagi to learn more.

As luck would have it—and as discussed in last month's Spin Doctor column—DS Audio seeks partners willing to help push the optical-cartridge approach. The company is happy to share details about the technology with other manufacturers. Ed says that once he got his hands on a DS Audio W2 cartridge and learned what kind of circuit was needed to work with it, he whipped up a working model overnight and was astonished by the results. He thought it would be a game changer for vinyl playback. The experience rekindled his enthusiasm for vinyl records. He further developed and refined the circuit he had hastily assembled, creating what became the EMM Labs DS-EQ1 and Meitner Audio DS-EQ2 optical equalizers.

Meitner and EMM Labs are the two sides of the same company, with Meitner focused mostly on lower cost price-competitive products while EMM Labs takes more of a cost-no-object approach. Ed said that the EMM Labs DS-EQ1 and Meitner DS-EQ2 use the same basic circuitry and are built in the same Calgary factory by the same people, but the EMM version has a more sophisticated power supply, balanced-output capability, and much more substantial aluminum casework. The output signal from an optical cartridge is naturally single ended, so none of the optical equalizers have balanced inputs.

In Spin Doctor 11, I wrote about how the optical pickup system allows for a tremendous reduction in the moving mass of the stylus and cantilever, increasing the responsiveness of the cartridge's tracking. Ed explained some other advantages that I missed that first time around.

The way the optical cartridge generates a signal is fundamentally different from how a magnetic cartridge works. Whereas the output of a typical phono cartridge is determined by the velocity of the stylus as it is deflected, an optical cartridge measures the amplitude of the displacement. A defect on a record such as a scratch causes a sudden but usually low-amplitude deflection; it happens fast, but the displacement is small. An optical cartridge doesn't see it as a significant part of the signal. Consequently, an optical cartridge has less surface noise. Another reason an optical cartridge is quieter is that the output signal is larger; the signal-to-noise ratio is bigger.

1 But see our review of the remarkable EMM Labs MTRS amplifier in the April issue.—**Jim Austin**

SME

ULTIMATE PERFORMANCE

SME is a world leader in engineering and innovation who, for the past 75 years, has been manufacturing precision-built components for some of the world's most demanding medical, aerospace and F1 racing applications. Their unique advanced engineering expertise is also vital to analog reproduction, where the slightest slippage or unwanted vibration will destroy the delicate audio signal being picked up by the stylus.

The new Model 60 turntable and the new VA Series tonearm advance the company yet again, delivering unrivalled innovation and the most advanced precision engineering and material sciences in the industry, with build quality and a stunning musical performance that other turntable builders simply cannot match – at any price. Experience it today.

STEREOPHILE PRODUCT OF THE YEAR 2023 EDITOR'S CHOICE

Experience the Model 60 at:

Excel Audio Newport Beach, CA 949-933-1599	Audio Vision SF San Francisco, CA 415-614-1118	Crescendo Fine Audio Denver, CO 303-444-4428	Sound Sanctuary Austin, TX 512-534-8613	Stereo Stereo Pittsburgh, PA 724-719-2330	JS Audio Bethesda, MD 301-656-7020	Soundlux Audio Miami, FL 305-306-7249

To find other SME dealers and learn more please visit **bluebirdmusic.com**

Bluebird MUSIC

the source for modern hi-fi

DISTRIBUTED IN USA AND CANADA BY BLUEBIRD MUSIC LTD
TEL 416 638 8207 BLUEBIRDMUSIC.COM

What's more, Ed told me that the cartridge's output signal naturally incorporates part of the RIAA EQ curve, greatly simplifying the filtering requirements within the equalizer box.

In contrast to the DS Audio W3 equalizer I wrote about in the April Spin Doctor, the EMM Labs DS-EQ1 doesn't offer any bass-tailoring options, unless you count the selectable 15Hz rumble filter. When I tested the W3 cartridge with DS Audio's own equalizer, I didn't encounter any low-frequency resonance problems using my Brinkmann La Grange turntable and 12.1" tonearm, so I left the filter off while testing the DS-EQ1.

As with all optical-cartridge setups, there isn't really anything to adjust—no gain or loading options—just hook up your tonearm cables, a ground wire, and a pair of output cables, and you're ready to go.

At $12,500, the DS-EQ1 costs about 25% more than DS Audio's own W3. DS Audio lets you buy cartridges without their equalizer, so you can mix and match. A few different manufacturers now make optical cartridge equalizers, and any of them will work with any DS Audio cartridge.

Sitting side by side, the DS W3 has a somewhat deeper chassis, more heft, and a beautiful, curvaceous front panel. The EMM box is just as well made, more slab sided yet still very elegant.

To make things a bit easier during my comparisons, I turned both units around so that their rear panels were facing forward, which made it easier to switch out the cables. Before I got down to comparisons, I spent a few days simply playing records through the DS-EQ1 to get a handle on its overall character.

I started with the title track from The Lounge Lizards album *The Voice of Chunk* (veraBra Records vBr 25). The clarity and resolution of the EMM DS-EQ1 was immediately on show; with the EMM Labs equalizer in the system, I heard an uncanny sense of layering and depth. When electric guitarist Marc Ribot's blistering, angular solo started up, a new space opened up, floating in the soundstage. I clearly heard the size and characteristic sound of whatever space they recorded Marc's guitar cabinet in. John Lurie's alto sax was bright and clear but never hard or aggressive. The percussion bristled with detail and color.

Switching over to the DS Audio W3 equalizer, the sonic impression was still dominated by the speed, resolution, and low noise, but the tonal balance shifted slightly richer and darker, with a tad more punch behind Douglas Browne's drums, giving them a little more flesh on the bones as my friend Herb Reichert would say.

Changing gears, I played *Vivaldi Lute Concertos and Trios* (Hungaroton SLPX 11978) with lutist Dániel Benkő. This is an exceptionally fine recording of a delightful performance, highlighting the tone character and sonic color of the lute and the string-orchestra accompaniment. As with the Lounge Lizards record, it was the EMM's ability to deliver sonic images with palpable depth and height that at first was the most striking, but when I focused on the sound of the lute, tonal details like the pluck of the natural gut strings and the resonance of the soundboard were real ear candy. Going back to the DS Audio equalizer, the sound took on a slightly richer and fuller-bodied quality, still with gobs of detail but with less of a spotlight on that part of the sonic picture.

I could make a convincing case for either the DS Audio W3 or the EMM Labs DS-EQ1 equalizer. Both sound stunning, allowing the qualities of the optical cartridge to shine through. The differences between EMM and DS Audio are more in their different flavors than in overall performance.

Here in New York, we have an amazing gelato shop called Il Laboratorio del Gelato, and if I'm headed there for a treat, I may think, should I get the Chocolate Amaretto Crunch or the Thai Chili Chocolate? Whichever choice I make, I know it's going to be heavenly.

UPGRADES FOR THE WAND 14-4 TURNTABLE AND TONEARM

In the January 2024 Spin Doctor, I wrote about the innovative Wand 14-4 turntable from New Zealand.[2] Almost immediately after I finished that piece, I was contacted by The Wand's US distributor about checking out some upgrades that are available for the Wand 14-4.

The upgrades are mostly trickle-down developments from the 14-5 turntable, allowing 14-4 owners to get some of the benefits from that more upmarket model. The most significant is the EV Battery Power Supply, which, as the name suggests, takes the motor off the power grid using a battery housed in a separate enclosure styled to match the turntable's design. Designer Simon Brown chose an old-school lead-acid battery for the EV, so there are none of the fire concerns you can get with lithium-ion batteries.

When you make the upgrade, your old SMPS power supply that came with the 14-4 becomes the battery charger, taking about six hours to reach full capacity. That should be enough power for about eight hours of playback, but if you're having an all-night party and you run out of juice, a switch lets you go back to wall power. I found the EV battery made a small but repeatable improvement in resolution of low-level detail, raising the overall performance of the 14-4 by a notch or two. This wasn't as big a step up as you get when, eg, you upgrade a Linn LP12 to a Radikal DC, but it's noticeable and worthwhile.

The second upgrade is a set of IsoAcoustics Gaia II footers, which replace The Wand's proprietary isolation feet. How much of a difference these make will depend somewhat on the supporting surface under your 14-4, but in a typical American wood-frame house, the improvement can be substantial.

I have a theory that turntables developed outside the US—in Europe or in this case, New Zealand—are poorly equipped to deal with US home construction, where floors can bounce like a trampoline. A turntable with a bouncy suspension, or even one with no isolation, can be very sensitive to footfalls. I once installed a very expensive

2 See bit.ly/WandSME.

but completely solid German turntable in an apartment that was next to where the D train—part of New York's subway system—comes off the Manhattan Bridge in Brooklyn. Every time a train went by, the record would skip. A set of Gaia footers solved the problem.

I like the 14-4's standard footers, with their O-ring rubber suspension, but the IsoAcoustics Gaias take the isolation level up a step. They raise the height of the 14-4 by more than an inch, so the appearance isn't quite as low and sleek as before. I typically have my turntable sitting on a high-tech Kevlar and carbon-fiber shelf made years ago by a French company called Sicomin, which in turn sits on a rack that's anchored to the floor. With this solid foundation, the Gaia footers didn't make much of a difference, but I've seen and heard plenty of setups where they were a godsend.

Finally, I tried the carbon-fiber platter mat from the 14-5, a thin sheet of carbon fiber with radial slits. These slits are designed to confine energy transferred from the record to the mat in one area so that it dissipates before reaching the stylus on the next rotation of the record. When you buy the mat, you also get a carbon-fiber ring that covers the extended rim of the 14-4's oversized platter. When I reviewed the stock 14-4, this rim struck me as a safety concern; just one clumsy record-cueing job could end a night of listening in tears when your precious stylus lands on bare aluminum rim and exposed screw heads. The carbon-fiber ring puts a smooth cover over the dangerous bits. It may not be the ideal surface to land your stylus on, but it's unlikely to tear it off.

Sonically, the platter mat resulted in a small but clear improvement over the bare acrylic surface of the stock platter. As I wrote in Spin Doctor 4,[3] I'm not a fan of hard platter surfaces unless there's a good clamping system to ensure a tight interface with the record. The 14-4 comes equipped with a well-designed dedicated clamp, but the carbon mat delivered improved detail and focus. Maybe it's those radial slits—who knows?—but Simon Brown clearly knows what he's doing.

3 See bit.ly/PlatterMat.

CONTACTS

EMM Labs
119-5065 13th St. S.E.
Calgary, Alberta
Canada T2G 5M8
Tel: (403) 225-4161
Email: sales@emmlabs.com
Web: emmlabs.com

The Wand 14-4 turntable
Manufacturer:
Design Build Listen
PO Box 32, Motueka 7143,
New Zealand
Tel: +64 21-502037.
Email: info@designbuildlisten.com.
Web: designbuildlisten.com.
US importer: Profundo,
2051 Gattis School Rd.
Suite 540/123,
Round Rock, TX 78664.
Tel: (510) 375-8651.
Email: info@profundo.us.
Web: profundo.us.

M·A Recordings record inner sleeves
$33.33 pack of 50 for 12" records
$17.50 pack of 25 for 10" records
M·A Recordings
PO Box 261192
Encino, CA 91426
Tel: (818) 907-9996
Email: info@marecordings.com
Web: marecordings.com

M·A RECORDINGS RECORD INNER SLEEVES

My friend Todd Garfinkle is a brilliant recording engineer, and for the last 36 years he has made some of the most beautiful recordings imaginable on his own M·A Recordings label. Like a modern-day audiophile reincarnation of Alan Lomax, he travels the world seeking amazing indigenous musicians, then records them in natural-sounding churches and other venues with exceptional acoustics. Todd's techniques are purist: He records with two omnidirectional microphones directly to two channels, leveraging his intuitive gift for finding the perfect spots for the musicians and the microphones. His recording setup fits in a carry-on bag.

For most of M·A Recordings' history, Todd embraced high-resolution digital formats for recording and distribution; more recently, he succumbed to requests to release some of his best-known recordings on vinyl. Unimpressed by any of the popular HDPE audiophile-grade inner sleeves, he sought a better solution for protecting his label's precious records. For some of his earlier CD releases, he used CD-sized sleeves made by a Japanese company, so he contacted that manufacturer to see if they had an LP-sized equivalent. They didn't, but after a few false starts, they proposed a sleeve made from the same material used in Shoji screens seen in Japanese homes. Room dividers. Historically, these screens were made from rice paper, but this made them quite fragile, especially in households with small children, who enjoyed poking little fingers through the paper. Modern screens use a much tougher woven blend of polyethylene terephthalate (PET), making them more resistant to little fingers but also permeable, so air can flow. Todd saw this as a big advantage over normal HDPE sleeves, which are airtight and watertight: They trap environmental humidity and any moisture left on the record after cleaning.

When you hold one in your hand, the M·A Recordings inner sleeves feel completely different from any sleeve you've previously encountered. They have a soft, clothlike texture that makes me think I could sew a pillowcase from it and be perfectly comfortable. Despite the softness, they have enough structure to allow a sleeved record to slide into the jacket without a corner folding over or having it bunch up as often happens with round-bottom HDPE sleeves. Measured against one of the popular Mo-Fi inner sleeves, I found the M·A inner just a tad narrower and perhaps a couple of millimeters taller. There's still plenty of width for 180gm or 200gm pressings. At the opening, the front and back edges are slightly offset, making it a bit easier to insert a record one-handed.

I know some people like to keep the record in its inner sleeve inside the outer sleeve but outside the jacket, but I like to keep my records sleeved as they came when new, with the record in its inner sleeve inside. When replacing the inner, I slide the record, including the new inner, into the factory-printed inner sleeve; then I slide the whole sandwich into the record jacket. The M·A sleeves were narrow enough to allow this with about 90% of printed inner sleeves. With the other 10% or so, the fit was too tight, so I had to insert the printed sleeve separately.

Garfinkle doesn't claim any special antistatic properties for his sleeves, but in use, I found that the softness of the M·A sleeves resulted in less friction and so less static buildup. I've seen some reviews complaining about the cost, but with new records selling for $30 or more, $33.33 (get it?) for 50 sleeves, or about 67 cents each, hardly seems extravagant. There's also a 10" version for 78 collectors, but so far there is no 7" version. Highly recommended. ■

The Ultimate in Ultrasonic Record Care

Degritter Mark II Record Cleaning Machine

"*[Sparkling] clean in ways that vacuuming cannot approach.*"

– Michael Fremer, *Stereophile*

musicdirect®

312-433-0200

LINN

INTRODUCING

KLIMAX SOLO 800

www.linn.co.uk

Our all-new, **reference mono amplifier** delivers absolute linearity under all conditions; even reducing audible distortion from the loudspeaker itself.

Solo 800 features novel and original technologies – such as Adaptive Bias Control and Utopik power – which combine to produce staggeringly low distortion measurements, superb signal-to-noise ratio, and unrivalled efficiency.

Klimax Solo 800 outperforms larger rivals comprehensively.

Book your demonstration at a Linn specialist:

www.linn.co.uk/try-linn

Arizona
Scottsdale / Tempe
LMC Home Entertainment

California
San Fran / San Diego
Basil Audio

Michigan
Ann Arbor
Paragon Sight & Sound

New York
Mount Kisco
Accent on Music

Puerto Rico
San Juan
Audiovisionaries

Virginia
Herndon
Elite Audio Solutions

Washington
Seattle
Definitive Audio

British Columbia
Vancouver
HiFi Centre

FIND OUT MORE:

HANA UMAMI BLUE

UMAMI SOUND - EXCEPTIONAL MUSICAL QUALITY

2023 the absolute sound PRODUCT OF THE YEAR AWARD

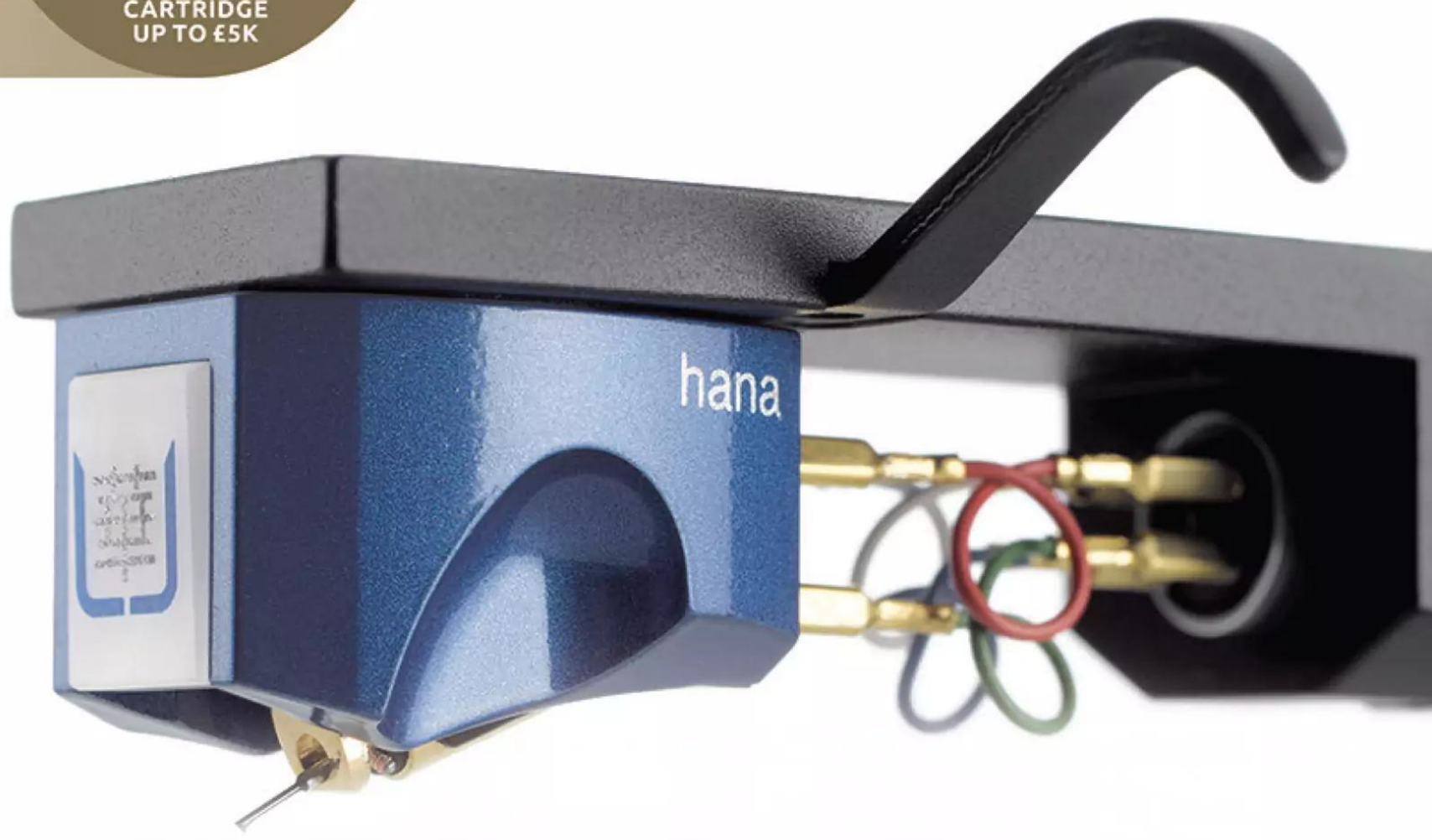
"With the Blue, **HANA** has set another baseline of performance-for-cost, even against competitors into the upper four-digit range. A sonic winner..."

- Andre Jennings, *The Absolute Sound*, January 2024

"The **HANA Umami Blue** brings that high-end cartridge 'wow' factor at a stunning, attainable price. It looks great and it sounds great."

- Alan Sircom, *hi-fi+*, Issue 226

hi-fi+ WINNER 2023 TURNTABLE CARTRIDGE UP TO £5K



HANA 華 UMAMI BLUE

"The Blue very well may be the sweetheart of the **HANA** line. The **HANA Umami Blue** clearly earns my Reviewers Choice Award for a superb phono cartridge design at such an attractive price!"

- Robert Levi, *Positive Feedback Online*, December 2023
PF Writers' Choice Award, 2023

HANACARTRIDGES.COM

BRIAN DAMKROGER

T+A Solitaire S 530

LOUDSPEAKER

I jumped at the chance to review T+A's $47,900/pair Solitaire S 530 loudspeakers for a few reasons.[1] First, because T+A is a well-established company with an approach I like and respect: They make hi-fi equipment of the highest quality but with prices that, though substantial, are in line with their technology and execution. Their stuff is very handsome with impressive industrial design, but T+A doesn't do audio jewelry. What's more, though T+A is aggressive in R&D—their "Company" webpage says, "Actually, we're scientists ..."—but they are selective in the use of new technology. The third reason I was interested in reviewing a product from T+A is that their prices and technical level place them in a market segment I know well.

What I *didn't* know until recently is that T+A makes loudspeakers, and they're quite different from the loudspeakers other companies make. I only learned this when I started hearing about the S 530 and its larger sibling, the S 540, from friends—friends whose ears I trust.

For the last 15 years, I've been listening to relatively conventional, multi-point-source speakers, which emit overlapping, approximately spherical wavefronts from drivers that usually are round. This group includes most recently the excellent Wilson Sasha DAW, which I still own. Before that string of speakers, I'd been a huge proponent of line sources and planar dipoles: Genesis IIs and Magnepans, for example. Most of those loudspeakers had shortcomings—limitations in ultimate dynamics, impact, detail, sometimes bass extension—but I always found something inherently *right* about the sound, especially the way they recreated space, which more than made up for those shortcomings.

Which leads to the fourth and final reason I wanted to hear these speakers. When my very first audiophile friend—the one I've known the longest—told me about them, he said, "I think you'd really like them. They're a line source." That sealed the deal.

The T+A Solitaire S 530

The design of the Solitaire S 530 is unusual:

1 Shorthand for T+A Electroakustic, GmbH & C. KG, which loosely translates to "Technology and Application in the Field of Electroacoustics, LLC."

SPECIFICATIONS

Description Three-way floor-standing loudspeaker. Drive units: 33.5" (850mm) long, 1.65" (42mm) wide Magnetostat tweeter; 24" (610mm) long vertical array of seven 3.5" (90mm) long, 2.5" (60mm) wide aluminum-cone Oval Membrane midrange drivers; two 8.75" (220mm) aluminum-cone woofers. Driver enclosure types: bottom-ported woofer, sealed midrange, sealed tweeter. Crossover frequencies: 180Hz, 1.8kHz. Frequency response: 29Hz–45kHz, ±1.5dB. Power rating: 200W music, 250W maximum. Sensitivity: 86dB/2.83V/m. Impedance: 4 ohms.
Dimensions 50.5" (1280mm) H (incl. base) × 10.25" (260mm) W × 17.75" (450mm) D. Weight: 132lb (60kg) each.
Finishes High Gloss Silver, High Gloss Black, and High Gloss Macassar Wood Veneer. The aluminum front baffle can be ordered in a brushed or black anodized finish for any of the three cabinet finishes.
Serial number of unit (pair) reviewed 3327 1361 00017. Manufactured in Germany.
Price $47,900/pair. Approximate number of US dealers: 27. Warranty: five years.
Manufacturer
T+A Elektroakustic GmbH & C. KG,
Planckstraße 9—11, D-32052
Herford, Germany.
Tel: +49 (0) 52 21 / 7676-0.
Email: info@ta-hifi.com.
Web: ta-hifi.com.
US distribution:
T+A North America Inc.,
2800 St. Mary's Rd., GA 31558.
Tel: (912) 576-7000.
Email: hello@tahifi-na.com.
Web: tahifi-na.com.

FIDELITYIMPORTS
WE BREATHE MUSIC

AXPONA 2024

7 GREAT ROOMS!

Visit our amazing brands!

1214	Perlisten, Primare, Michell
1215	Lowther, Triode
1218	Perlisten, Audia Flight
1221	Q Acoustics, Unison Research, Ruark
1222	Diptyque, Audia Flight
1225	Acoustic Energy, Gold Note
1441	Opera, SOULNOTE

fidelityimports.com **@fidelityimportsusa**

When was the last time you saw a speaker that uses seven midrange drivers? Or, even weirder, a tweeter that's almost 3' long?

Actually, the S 530 is relatively conventional compared to other line-array loudspeakers; consider The Note from Laufer Teknik, which stands maybe 10' tall and has[2] 50+ tiny drivers. The S 530 is a 4'-tall tower in a conventional-looking cabinet that's deeper than it is wide but impressively stout and, based on a knuckle rap, substantially inert. You start to notice how unusual it is when you look at the front baffle, consisting entirely of a single thick slab of aluminum with drivers recessed into fluidly shaped, tapered recesses. The "Organic" baffle, as T+A calls it, is a waveguide that shapes the dispersion patterns of the individual drivers into "an ideal line source." The quote is from the company website. Apparently a loudspeaker doesn't need to be 10' tall to be a proper line source.

And those drivers! The S 530's front baffle does not hold, as more conventional loudspeakers do, a vertical array of round drivers in different sizes. On the left are seven ovals. On the right is one extended ... what exactly?

The electrostatic tweeter was one of the first technologies developed by Siegfried Amft when he started T+A in 1978, and they've been a part of the company's DNA ever since. So, I was surprised to learn that the tall thing on the baffle of the S 530 isn't an electrostatic tweeter but a 33.5" long, 1.65" wide magnetostatic, or planar magnetic, tweeter. It was developed in-house by T+A's R&D department, which, the company says, employs 15 engineers. Specifically, the tweeter consists of a Kapton membrane less than 10µm thick onto which a complex array of aluminum patterns has been spray-deposited.[3] Five parallel aluminum traces run down the center of the membrane, connected in series to form a single conductor more than 10m long. The outer portions of the membrane, which aren't part of the center conductor, are covered almost completely with aluminum in a pattern of closely spaced hexagons, intended to create a more uniform magnetic field across the membrane. Behind the membrane are four columns of 64 "Toblerone-shaped" magnets, their narrow ends pointed toward the membrane, located midway between the traces. The result, T+A says, is a magnetic field that changes to oppose curvature in the membrane surface as it deflects, keeping its movements constant over its surface. The result of all this is, to repeat, a tweeter that's almost 3' long.

The change from electrostatic to magnetostatic, I learned, was driven by the former's susceptibility to arcing in warm, humid

2 Or had, since they don't seem to be made anymore. You can see photos on *Stereophile*'s website at stereophile.com/content/impressive-sound-benchmark-and-laufer-teknik.

3 See the discussion of this technology in Julie Mullins's review of the Audeze LCD-5 headphone, at stereophile.com/content/audeze-lcd-5-headphones. There's no connection between the two companies except that they're using similar technology.

MEASUREMENTS

I used DRA Labs' MLSSA system, a calibrated DPA 4006 microphone, and an Earthworks microphone preamplifier to measure the T+A Solitaire S 530's quasi-anechoic frequency- and time-domain behavior in the farfield. The center of the line-source tweeter is just 32" from the floor, but as the loudspeaker on its feet is slightly tilted back, I examined the farfield behavior on an axis at right angles to the front baffle with the microphone aimed at the center of the tweeter. The grille was left off for these measurements.

When measuring a loudspeaker's farfield response, the microphone should be at least as far away as the drivers' vertical dimension.[1] Otherwise, the low frequencies will be boosted due to the nearfield proximity effect. As the S 530's midrange array is 24" tall and the magnetostatic tweeter is 35.5" tall, I placed the microphone 55" away rather than my usual 50". To check that the microphone was sufficiently in the farfield, I repeated the response measurements on the same axis at 1m, 2m, and 3m. The 1m response had a slight nearfield rise in the lower midrange and bass; the response at 55" was identical to those at the greater microphone distances. (The 2m and 3m measurements suffered from earlier reflections than that at 55", which is why I discuss the farfield behavior at the latter-distance measurement.)

T+A specifies the S 530's voltage sensitivity as 86dB/2.83V/m, the units otherwise unspecified. My B-weighted estimate was 84.6dB(B)/2.83V/m, though the quasi–line-source behavior will slightly increase the in-room sensitivity. The S 530's impedance is specified as 4 ohms. The impedance magnitude (fig.1, solid trace), measured with Dayton Audio's DATS V2 system and with the tone controls set to their default, central "LIN" positions, varied between 4 ohms and 8 ohms over most of the audioband, with minimum values of 3.46 ohms at 105Hz and 3.2 ohms at 20kHz. The effective resistance, or EPDR,[2] lies below 4 ohms between 39Hz and 197Hz, between 331Hz and 939Hz, and above 10kHz. The minimum EPDR values are 2.24 ohms at

1 See the discussion in the third part of my AES paper on loudspeaker measurements at stereophile.com/content/measuring-loudspeakers-part-three-page-3.

2 EPDR is the resistive load that gives rise to the same peak dissipation in an amplifier's output devices as the loudspeaker. See "Audio Power Amplifiers for Loudspeaker Loads," *JAES*, Vol.42 No.9, September 1994, and stereophile.com/reference/707heavy/index.html.

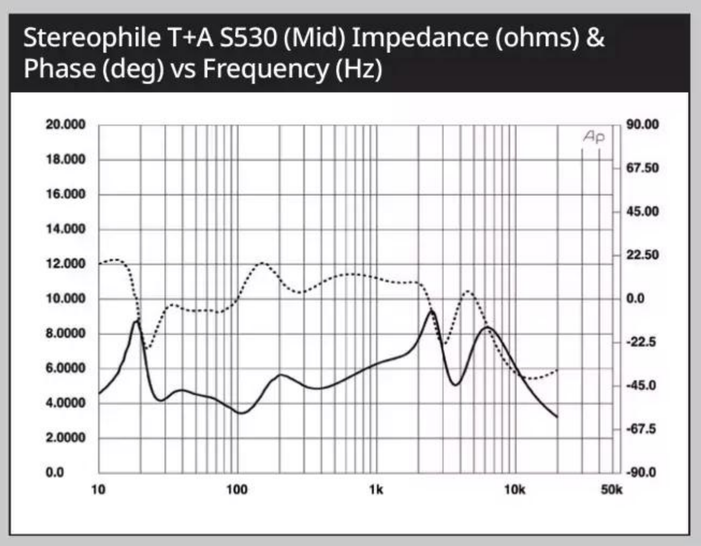


Fig.1 T+A Solitaire S 530, electrical impedance (solid) and phase (dashed) with tone controls set to LIN (2 ohms/vertical div.).

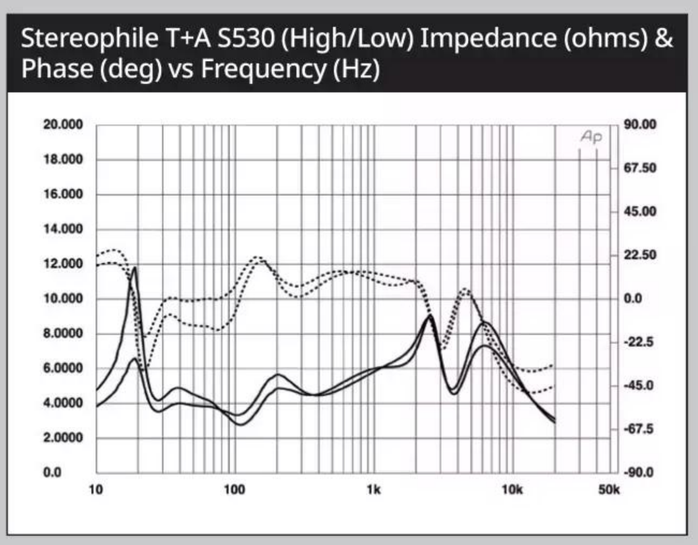


Fig.2 T+A Solitaire S 530, electrical impedance (solid) and phase (dashed) with tone controls set to +1.5dB and –1.5dB (2 ohms/vertical div.).

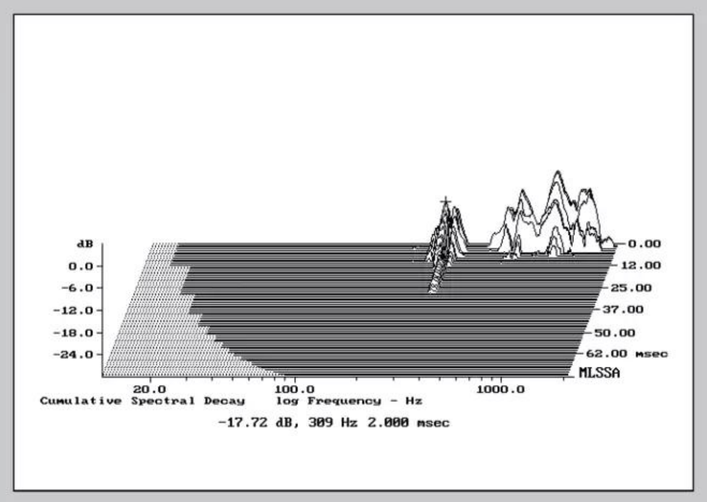


Fig.3 T+A Solitaire S 530, cumulative spectral-decay plot calculated from output of accelerometer fastened to side panel level with the central midrange unit (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz).

climates. The technology behind the new driver grew out of the development of the TPM 3100 headphone transducer, a project that was itself a spinoff of earlier loudspeaker R&D.

So, what about the seven ovals on the other side of the front baffle? Those are midrange drivers. It's the first time T+A has used oval drivers—with aluminum cones instead of their usual fiber/carbon mix. The oval shape produces a tall, narrow dispersion pattern that more effectively combines to form the S 530's line array, and for a given surface area, allows their acoustical centers to be closer to the elongated tweeter's.

What about the bass? The bass units are on the side in the form of a new, round, 8.75"-diameter aluminum-cone woofer, which replaces the 8.25" and 8.75" fiber/carbon ones that T+A used previously. The two woofers are side-firing and mounted midway up the cabinet. They are now in a ported (bass-reflex) chamber and in-phase,

measurements, continued

131Hz, 3.31 ohms at 512Hz, and 1.2 ohms at 20kHz.

Fig.2 shows the impedance magnitude and phase with the controls set to their +1.5 and –1.5 positions. The +1.5 setting increases the amplitude of the low-frequency peak at 19Hz but lowers the minimum magnitude at 110Hz to 2.77 ohms. The EPDR now lies below 2 ohms between 120Hz and 152Hz and above 10kHz, with minimum EPDR values of 1.85 ohms at 135Hz and 1.2 ohms at 20kHz. Even at the other tone control settings, the S 530 is a demanding load for the partnering amplifier.

I investigated the enclosure's vibrational behavior with a plastic-tape accelerometer. The panels were quite inert; the only resonant modes I found were at 309Hz and 1066Hz on the sidewalls level with the central midrange unit (fig.3). As these modes are very low in level, this behavior shouldn't have audible consequences.

The woofers' response, measured in the nearfield with an Earthworks QTC-40 mike (fig.4, blue trace), has the expected minimum-motion notch at a low 27Hz, which implies extended low frequencies. The downward-firing port's nearfield output (fig.4, red trace) peaks slightly below the tuning frequency, and other than low-level peaks at 295Hz and 550Hz, its upper-frequency rollout is clean. The output of the woofers crosses over to that of the midrange unit (green trace) close to the specified 180Hz. The peak between 40Hz and 150Hz in the complex sum of the midrange, woofer, and port responses (fig.4, black trace below 300Hz) is due to the nearfield measurement technique, which assumes that the drive units are mounted in a baffle that extends to infinity in both the vertical and horizontal planes.

The black trace above 300Hz in fig.4 shows the S 530's quasi-anechoic farfield response, taken without the grille and averaged across a 30° horizontal window centered on the central tweeter axis mentioned earlier. The midrange is elevated, and there is a lack of energy in the presence region. Repeating the measurement with the grille in place slightly reduced the levels between 2.5kHz and 9kHz and above 13kHz.

Fig.5 shows the effect of the three tone-control switches on the measurement axis, set to their +1.5 positions (red trace) and to their –1.5 positions (blue

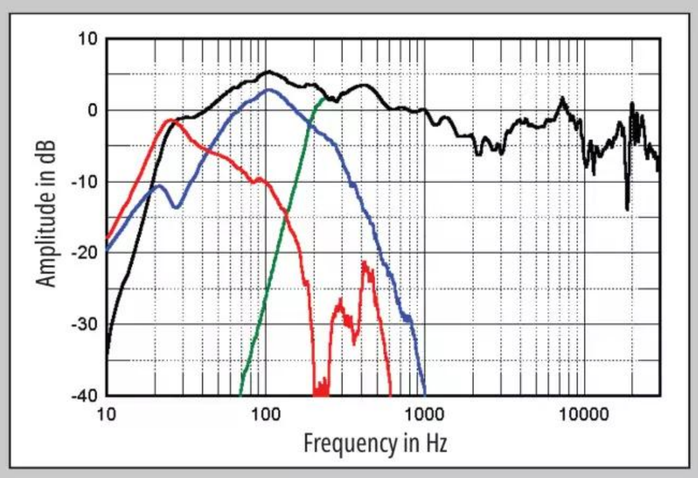


Fig.4 T+A Solitaire S 530, anechoic response without grille on central tweeter axis at 55", averaged across 30° horizontal window and corrected for microphone response, with the nearfield responses of the midrange units (green), woofers (blue), and port (red), and their complex sum (black), respectively plotted below 300Hz, 1kHz, 600Hz, and 300Hz.

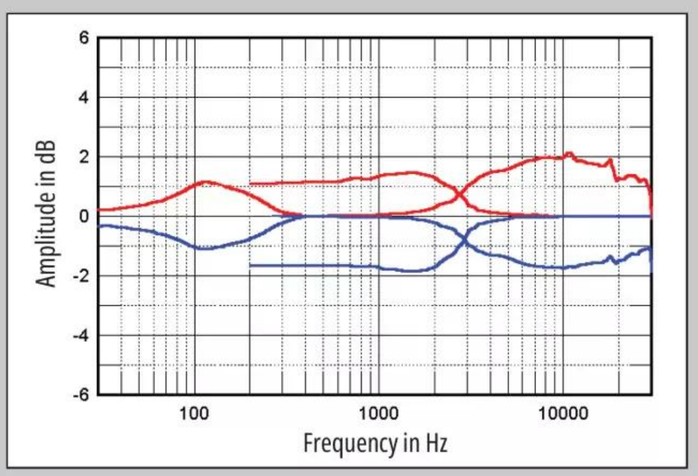


Fig.5 T+A Solitaire S 530, effect on central tweeter axis of Bass, Mid, and Treble controls set to +1.5dB (red) and to –1.5dB (blue) (1dB/vertical div.).

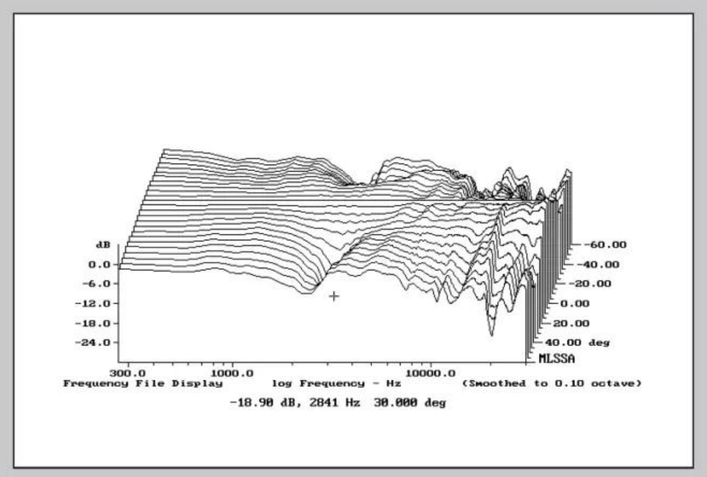


Fig.6 T+A Solitaire S 530, lateral response family at 55", normalized to response on tweeter axis, from back to front: differences in response 60°–5° off axis on midrange side, reference response, differences in response 5°–60° off axis on tweeter side.

Innovation through Technologies | Outstanding Artisanal Capabilities

aquahifi.com

aqua
acoustic quality

THE EXR AUDIO STAND SYSTEM

A LOW NOISE FLOOR IS FUNDAMENTAL

The new Patented HRS EXR Audio Stand Systems at McIntosh House of Sound in New York City and at the McIntosh Villa of Sound at CES 2024.

www.AVisolation.com | 716.873.1437

HRS®
HARMONIC RESOLUTION SYSTEMS

whereas in earlier T+A models, the chamber was sealed and the drivers in each pair operated out of phase. The point of all this is to create a loudspeaker that energizes a room in a fundamentally different way than conventional speakers.

Conventional round-driver speakers generate a soundwave with a (very roughly) spherical wavefront; think of each driver as at the center of an expanding sphere of sound, at least in the forward direction. What reaches the ear in such speakers is an overlapping combination of spherical wavefronts, each radiating from a different center.

In contrast, a line source is best envisioned—this is the idealized abstraction—as sound emanating from an infinitely long vertical line. It's clear from symmetry (if you think about it) that at least toward the middle of that vertical line, sound can only propagate outward, not up or down. The consequence is that the sound emitted propagates out like a cylinder rather than a sphere.

A real-world line-source loudspeaker isn't infinitely long, so this is all only a rough approximation. What's more, the room has a ceiling and a floor—top and bottom boundaries that constrain the soundwaves. The result is that the sound intensity falls off fast at the top and bottom. The wavefront emerging from a real-world line source is more like a can of Coke (or, very roughly, half a can) than an infinite cylinder. For a speaker like the S 530, you'll want to be sitting down to listen, the speakers aimed accurately at the listening seat. Stand up, and the sonic presentation changes drastically—much more than with a more conventional loudspeaker.

Another big difference between a conventional, point-source loudspeaker and a line-source loudspeaker is how quickly the music's intensity—its volume—drops as you move away from it. With a point source, the wavefront is an expanding sphere, the surface area of which increases as the square of the radius, so the intensity gets smaller as the inverse square of the distance from the source. In contrast, the surface area of a cylinder increases in direct proportion to the radius, so the intensity of sound emerging from a line source speaker gets smaller as *1/r*. With a line source speaker, the music volume remains louder farther out into the room. If you're used to conventional designs, this can be a little disconcerting.

This fact also has implications for how the sound interacts with surfaces in the room. There's less interaction with the ceiling and floor, but what about the sidewalls? It's hard to say, because a loudspeaker can call itself a line source while still having a fairly narrow horizontal dispersion pattern; the amount of interaction with the sidewalls depends on the details.

measurements, continued

trace). The response with the controls set to their central, default position has been subtracted from each measured response so that just the differences are shown. The Bass controls raise or lower the level of the woofers by 1dB, the Mid control changes the midrange units' output by +1.5dB/–1.9dB, and the Treble control adjusts the tweeter level by +2dB/–1.8dB.

The T+A's horizontal dispersion, normalized to the response on the central tweeter axis (which thus appears as a straight line), is shown in fig.6. The off-axis behavior to the side of the baffle closest to the tweeter is shown to the front of this graph. A suckout close to the upper crossover frequency appears at extreme off-axis angles, but the traces are otherwise fairly even. There appears to be more presence-region energy off-axis on the midrange side of the baffle, which T+A says should face away from the room's sidewalls. The S 530's dispersion in the vertical plane, again normalized to the response on the tweeter axis (fig.7), appears to show that the response is better maintained above the central tweeter axis. It wasn't possible to investigate the vertical behavior response at off-axis angles greater than ±20°, but the height of the tweeter and midrange array should narrow the radiation pattern in those regions.

In the time domain, the S 530's step response (fig.8) indicates that all the drive units are connected in positive acoustic polarity. The decay of each unit's step smoothly blends with the start of the next driver's step, which implies an optimal crossover topology. The S 530's cumulative spectral-decay plot on the tweeter axis (fig.9) features a clean initial decay, though a lot of "hash" is then visible in the region covered by the Magnetostatic tweeter. As I have written in the past,[3] with a large drive unit like this tweeter, this behavior is not so much due to actual resonances but to the diaphragm behaving in a chaotic manner.[4] The individual elements of the diaphragm "shimmer" as their average position responds in a linear manner to the driving force.

The T+A Solitaire S 530's measured performance is difficult to interpret, but it would appear that its balance will be somewhat polite. However, given the effects of the tone controls, it should be possible with careful setup and experimenting with toe-in to the listening seat to get an even, full-range tonal balance.—**John Atkinson**

3 See the discussion at stereophile.com/content/martinlogan-masterpiece-renaissance-esl-15a-loudspeaker-measurements.

4 Chaotic in the formal mathematical sense: "the inherent unpredictability in the behavior of a complex natural system."

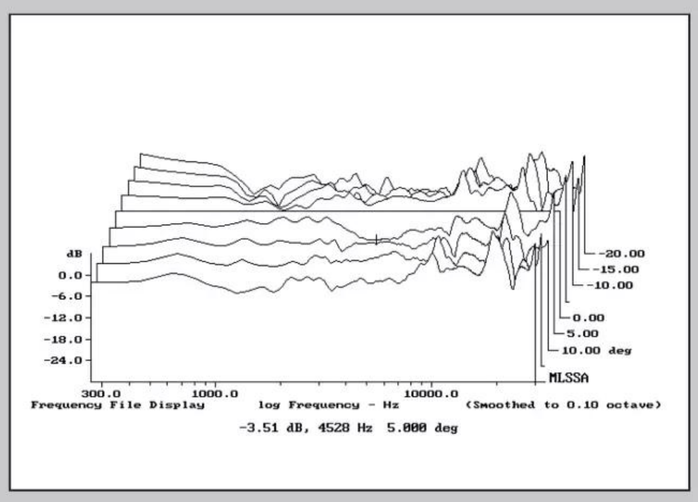


Fig.7 T+A Solitaire S 530, vertical response family at 55", normalized to response on central tweeter axis, from back to front: differences in response 20°–5° above axis, reference response, differences in response 5°–20° below axis.

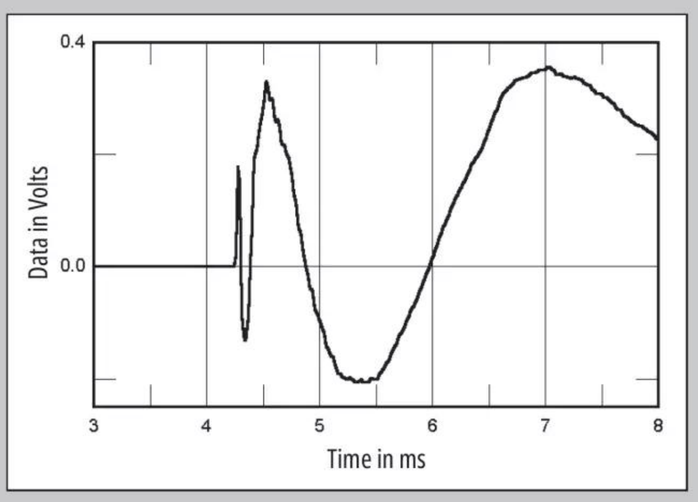


Fig.8 T+A Solitaire S 530, step response on central tweeter axis at 55" (5ms time window, 30kHz bandwidth).

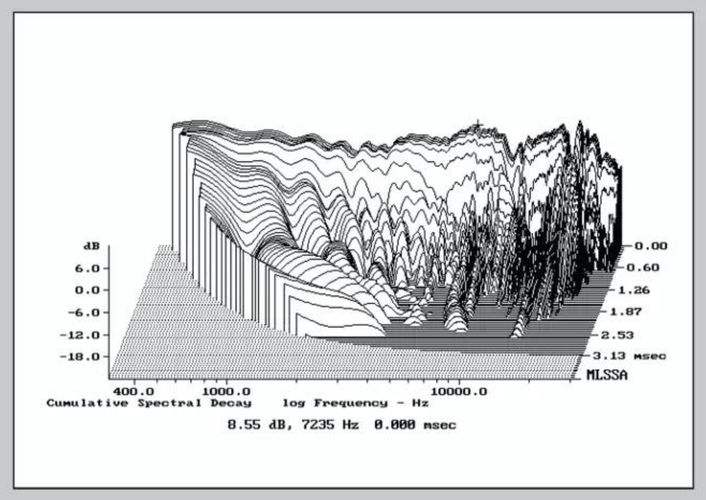


Fig.9 T+A Solitaire S 530, cumulative spectral-decay plot on central tweeter axis at 55" (0.15ms risetime).

fezz
MADE OF MUSIC.

FROM PIN-DROP SILENCE TO PURE STARTLING REALISM

INTRODUCING FEZZ AUDIO

With their warm and natural sound, vacuum tube amplifiers are the pinnacle of the art and science of hi-fi. Any properly balanced tube system delivers a more nuanced sophisticated listening experience but Fezz Audio takes it one step further with the use of toroidal transformers for the amplifier's power supply.

With far lower flux leakage and radiated energy than standard transformers, toroidal power transformers ensure that the amplifier's sensitive circuitry doesn't pick up additional noise from the power supply.

The result is extended bandwidth, flat frequency response and very low distortion—from dead silence to sunburst finishes.

Fezz Audio amplifiers deliver transparency, clarity, tone and faithful reproduction of the original performance so the music and emotion come through in their purest form.

The name might be new to you but with their outstanding musicality and superior value for money, it's a name you'll be hearing a lot more.

"The Mira Ceti is a very good amplifier at a very good price."

Stuart Smith, Hifi Pig, August 2019

"An excellent and very quiet amplifier, it is firmly recommended."

David Neice, Wall of Sound, April 2019

To find a dealer and learn more visit **bluebirdmusic.com**

Bluebird MUSIC

the source for modern hi-fi

DISTRIBUTED IN USA BY BLUEBIRD MUSIC LTD
TEL 416 638 8207 BLUEBIRDMUSIC.COM

Setup

My listening room is 24' long, so I started out putting the speakers 1/3 of the distance (8') out from the front wall and my listening chair two-thirds of the way (16') out. I started with the Solitaires about 4' from the sidewalls (to the middle of the noncentered tweeter) and my chair in the middle of the room, forming a rough equilateral triangle. The S 530 has three ±1.5dB rocker switches, one each for Bass, Midrange, and Treble; I left these in the "LIN" (flat) position.

After the speakers had been burned in for about a week, I sat down and cued up the first album. The difference from what I was used to was so astonishing that my initial reaction was that something was wrong—not so much that the speakers were broken but that reality was out of kilter. For an instant, my mind flashed to an image burned into my brain at an early age, of furniture and other things suspended in the vortex of a tornado. (Think *Wizard of Oz*.) The performers were solid, three-dimensional objects suspended in three-dimensional space in a way my brain couldn't

quite accept. The next instant, that mental image was gone, the left side of my brain kicked back in, and I started to process what I was hearing. Over the course of a few minutes, I went from thinking something was wrong to recognizing that it wasn't wrong, just different. Not long after that, during a round of moving the speakers to find their optimal positions, I started to think that what the Solitaires were doing wasn't just different—it was right.

T+A's James Shannon stopped by a week later to check in and help with setup. I'd already, on my own, moved the speakers back a couple of feet and out about 7" farther, and I was happy with how things were progressing. Jim's impressions were the same as mine: that the speakers and room were working together well, the system was detailed and articulate, and the transitions between the drivers were essentially inaudible.

But we also agreed that the system was bass-shy, so that's where we started. By the end of the day, we'd moved the speakers back another 2', toed them in a bit more, moved my chair 1' 7" farther away from the speakers, and set the bass switch to +1.5dB and the midrange and treble switches to –1.5dB. A bit more adjusting and aligning, and things were set. In the end, the speakers were 3' 8" out from the front wall, 3' 4" in from the sidewalls, and toed in a bit. My chair was another 13' 7" into the room, so about a foot past the 2/3 point. Spiked and leveled, the centers of the S 530's tweeters were 31.5" above the floor, the front baffles tilted slightly back. At the listening position, the volume of test signals dropped off sharply below about 2' and above 5', putting my ears, at 38–39" from the floor, toward the middle of the speakers' vertical dispersion pattern, well into that cylindrical-propagation range.

Listening

As I progressed through this setup procedure, it became apparent that the Solitaire S 530s were going to be something special in how they created space, but I wasn't prepared for how good they'd eventually be. Imaging, soundstage, the recreation of a performance space, ambience—the T+A's checked all the audiophile boxes and then some. Not once during the whole audition—and I had the speakers for months—did they identify themselves as a source of the sound or even hint at their physical presence. Instead of placing the musicians in the room, these speakers took me—the listener—to the recording venue.

I've struggled to find an adequate way to describe the difference between this experience and what I'm used to with conventional speakers. This is the best I've come up with: It's like the difference between looking at a painting with apparent, painted depth and looking at a sculpture, an actual 3D object. Of all the speakers I've heard and remember, the Solitaire S 530s did the best job of evoking the *je ne sais quoi* of a live performance. And recreating the spatial aspects of a performance was the single most important variable in that equation.

The S 530s were stunning in their recreation of an engagingly unvarnished 1995 recording of Steve Earle, Townes van Zandt, and Guy Clark playing "In the Round" at the tiny Bluebird Café in Nashville, from *Together at the Bluebird Café* (American Originals Records, AMO-4006-2, CD). I had the good fortune of seeing a couple of the Bluebird's "In the Round" shows around that time, and I have a vivid memory of how they sounded and felt. The Solitaires nailed it.

They did a superb job, too, on much larger shows, including on the opening cut from Jackson Browne's *Running on Empty* (Asylum Records—6E-113 LP). The audience sets the stage on this cut, literally, as the band is getting set. What really impressed me with the T+A's was the clarity and precision of my location with respect to people around me, the stage, and the venue as a whole. A similar thing happened—having a very clear sense of my location—with some of the cuts on Jimmy Buffett's album *Encores* (24/96 FLAC, Mailbox Records/Qobuz), which I chose as one of my Records to Live For in the February issue.

ACCUSTIC ARTS

Finest Music Components

Handmade in Germany

TUBE PREAMP V

Audiophile fully balanced
reference preamplifier
(Phono option)

AMP IV

Reference class power amplifier –
our bestseller and world-wide champion
max. 2 x 620 watts on 4 Ω

MONO VI

Our statement in terms of
audiophile mono power amplifier
> 1,500 watts on 4 Ω

Visit us:

AXPONA

AUDIO EXPO NORTH AMERICA

Listening room
Schaumburg C

I was always envious of the sound engineers at rock concerts. Their seats were better than the best—inside the cocoon of a sound booth, dead center, 1/3 of the way back on the floor and about 6' above the teeming mass of humanity. It was immediately apparent that the Buffett recording was mixed by someone in the sound booth because that was exactly where I was sitting, looking out over the audience sweeping from in front of me down to the stage. Yup, I was right to be jealous.

The Seraphim recording of Delibes's opera *Lakmé*, with Mady Mesplé, Charles Burles, and Roger Soyer playing Lakmé, Gerald, and Nilakantha, respectively, and the Orchestra & Chorus of the Opéra-Comique, Paris, Alain Lombard, cond. (Seraphim SIC-6082 LP), tells me a lot about how well a component portrays a complex and dynamic arrangement of things having wildly different sizes and characteristics. Looking back through several years of notes, I noticed that I frequently described great speakers as reproducing a level of detail that beautifully portrays the performer and their movements within a coherent space. But such words didn't even occur to me when I listened to this *Lakmé* through the Solitaires. The performers were just there, on the stage, and of course there was a single coherent space. What else would there be?

To resolve detail, a line source must eliminate vertical dispersion, something speakers of a certain age didn't do all that well. The S 530 does. Bypassing the numbers and cutting to the chase, the height of the Solitaire's dispersion pattern at the listening position was essentially the same as the length of the driver. It wasn't surprising then that their resolution of detail matched that of speakers I consider to be excellent in this regard, but they did it differently. As conventional speakers get better at combining the dispersion of their drivers in space and time, the scale of the picture they draw gets finer and more precise, and more details become audible. Take the opening cut on Neil Young's *Tonight's the Night* (Reprise Records REP 54 040 LP). The best conventional speakers produce a wealth of fine detail. I notice things like subtle rasps in his voice as the angle of Neil Young's head changes and that there are two people standing off-stage and talking. When I switched to the Solitaires, I didn't notice rasps or specific things happening around the two people. Those people were just there, 3D and solid, animated in a way that seemed completely natural.

It's difficult to describe the Solitaire's tonal balance simply or comprehensively because it's so adjustable. ±1.5dB can often change a performance and venue from warm to cool, and with crossover points at 180Hz and 1.8kHz, those controls can make noticeable changes to individual instruments. 180Hz is the heart of where male vocals, celli, and guitars lie, as well as the bottom half of the piano—all large elements of much of what we listen to. 1.8kHz is particularly notable in that only the piccolo, violin, and piano have ranges that can project a lot of power above this point.

The way my room was built and set up, getting acceptable levels of low bass and impact with the S 530 required having the speakers near the corners, the bass switch at +1.5dB, and the midrange switch either flat or at −1.5dB. On *Encores*, when I switched the mids from flat to −1.5dB, Jimmy Buffett went from warm and robust to thin and pale, his guitar from resonant and golden to kind of washed out, as if its strings needed changing. String quartets were rich and gorgeous with the lower midrange setting, but if I was being honest with myself, a bit too much so, with violins sounding a bit like violas.

I used both the −1.5dB and flat settings with the treble as well. The former worked better with recordings that were inherently thin or that perhaps had been indifferently produced; they were edgy and sibilant with the flat setting, or maybe a bit over-aggressive. More often, setting the treble flat gave instruments and voices a better balance between the opposite ends of their ranges. Buffett's guitar was a good example here as well. It was gorgeous with the treble set to −1.5dB, and it had more weight, spatially and tonally. But when I compared the two, it was clear that the treble cut was shortchanging the transients of the strings and the bright, ringing tone Martin guitars are known for.

The midrange adjustment was a bit different in that its effects were less specific but had a large effect on the overall character of a performance. The simplest way to describe the midrange switch is to liken it to a combination of the contrast and saturation settings on a digital image. Increasing it relative to the other two instantly

brought a performance to life. The performers woke up, the pace of the music increased and became more precise, tonal palettes became denser and more varied, ... the list goes on through the audiophile and digital-darkroom vocabularies. The changes were unfailingly audible and initially positive. What about long-term? In some cases, it was a slam dunk. In others, a niggling voice told me that the changes were a little too good to be true, not quite honest. In still others, I went through the classic progression, first equating spectacular with better but eventually reaching a point where spectacular was too much to handle.

Summing up

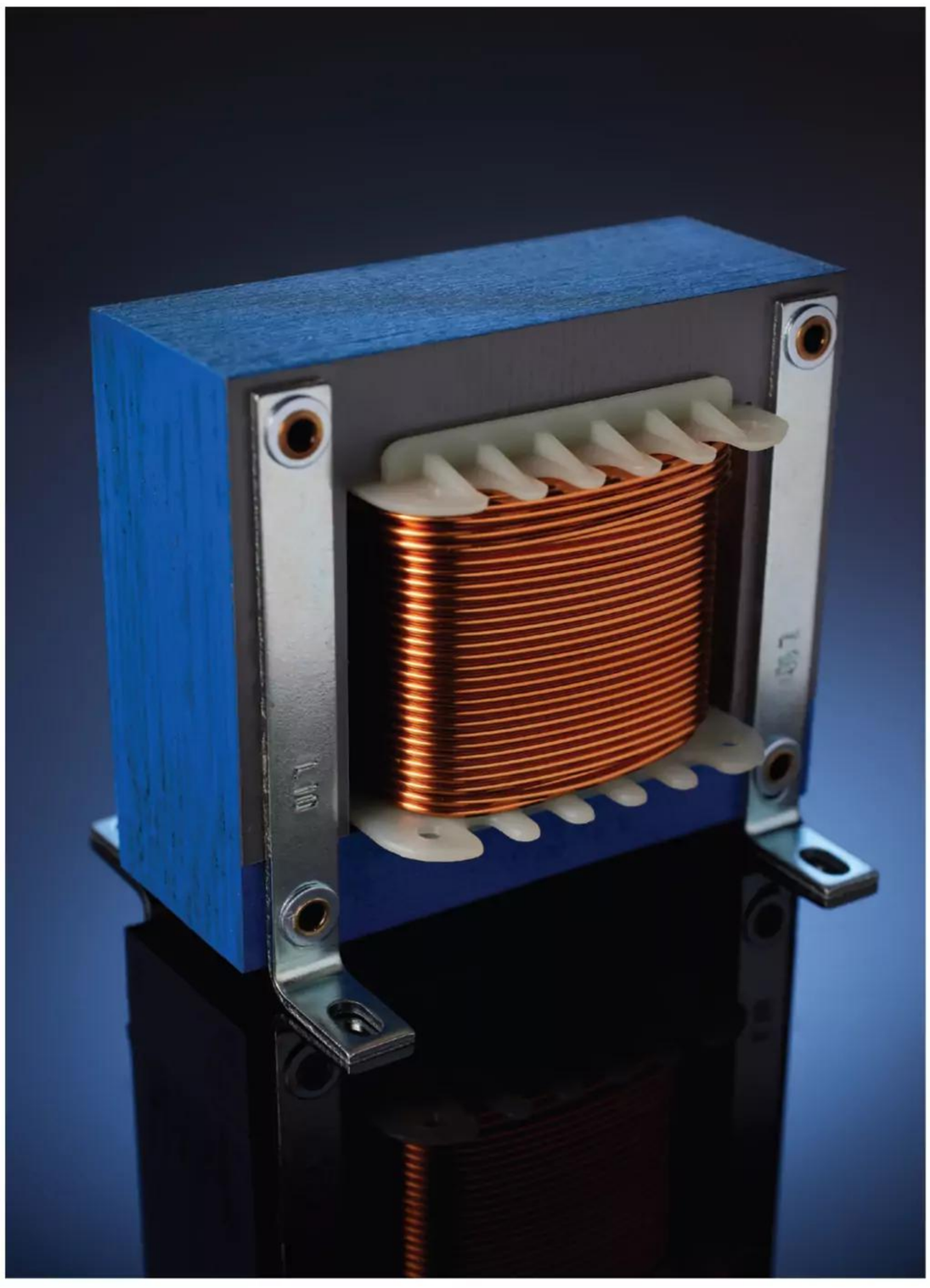
I loved my time with the S 530s. They reminded me why I was sold on line source and planar speakers so many years ago. My experience with these speakers went a long way toward demonstrating that the shortcomings I thought of as inherent in a line source design aren't inherent at all.

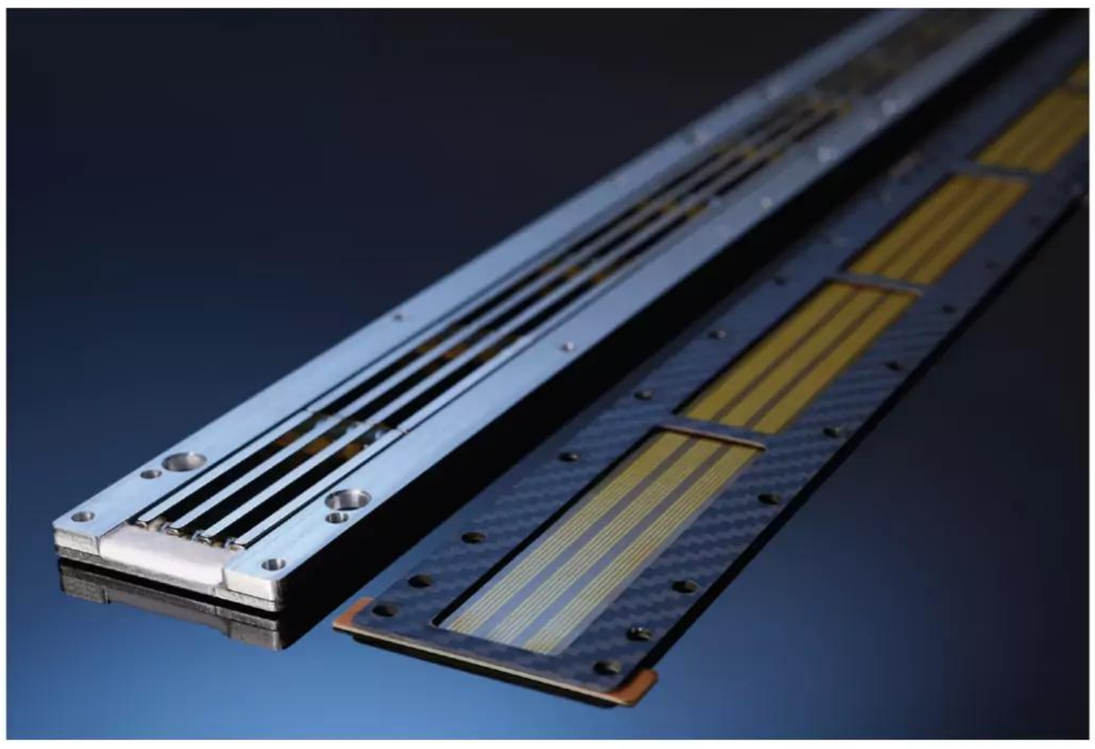
Hearing the Solitaire S 530s made me regret that I wasn't aware of T+A speakers sooner. The S 530 is every bit of what I'd expected, based on what I knew about the company and their digital components: a super-premium product that, while certainly handsome, was more about technology, execution, and performance than beauty for its own sake. I'd love to have heard previous Solitaire models like the fully active OECs, with their glowing tubes, or the fully active, fully digital AD4, to better understand the R&D path that led to the S 530s.

Wherever it came from, the S 530 is an outstanding speaker, one that anyone given the chance should hear. Definitely recommended. ■

ASSOCIATED EQUIPMENT

Analog sources Spiral Groove SG2.1 turntable and Centroid tonearm, VPI HR-X turntable and JMW Memorial tonearm; Grado Epoch, The Reference, and Signature Reference; Micro-Benz SL, Audio-Technica AT-MONO3/LP phono cartridges.
Preamplifiers Sutherland Line Blocks, Phono Blocks Refined, and Phono Loco.
Power amplifier VTL Ichiban Signature.
Digital sources Audio Research CD6E CD Player, Mytek Brooklyn DAC+.
Loudspeakers Wilson Audio Specialties Sasha DAW.
Cables Shunyata Sigma v2 NR and XC AC cords; Shunyata Delta v2, Alpha v2, and Sigma v2 interconnects, Sigma v2 phono and speaker cables; Shunyata Alpha v2 S/PDIF digital cable.
AC power conditioning and distribution Shunyata Copper-CONN, SR-Z1 AC outlets; Shunyata Everest 8000 (analog front-end), Denali 6000/T v2 Limited Edition (digital front-end) Power Distribution Systems.
Accessories Audio Desk Systeme Glass LP and Kirmuss KA-RC-1 ultrasonic record cleaning machines; Sutherland Timeline; LAST Stylus Cleaner, Stylus Treatment, and LP Treatment; Fozgometer Azimuth Range Meter; WAM Engineering analog alignment tools (WallyReference, Scale, Skater Pro, and Scope v2); Nordost ECO 3 antistatic fluid; Finite Elemente Pagode Master Reference equipment rack; Cerabase and Cerapuc equipment footers.
—Brian Damkroger





MOMENTUM MxV INTEGRATED AMPLIFIER

THE ULTIMATE INTEGRATED

THE MOMENTUM MxV INTEGRATED AMPLIFIER by Dan D'Agostino Master Audio Systems achieves a level of performance and refinement that was never before possible in an integrated component. Combining the front-end technology of the Momentum HD Preamplifier and the power section of the Momentum MxV Amplifier, it delivers Momentum Series performance in a compact framework whose elegant design only hints at the advanced circuitry within.

Incorporating recent advancements in the Momentum Series, the Momentum MxV Integrated Amplifier expresses the fullest potential of a single-chassis solution. The line-stage section can be augmented by a field-upgradable digital streaming module, as well as a phonostage with variable loading for MC cartridges. The result is a seamless circuit from input to output, possessing the authoritative power capable of commanding any loudspeaker.

Created for listeners who demand the uncompromising D'Agostino signature in a single component—one that is elegantly conceived and impeccably crafted—the Momentum MxV Integrated Amplifier promises an unequalled audio experience.

Dan D'Agostino
MASTER AUDIO SYSTEMS

dandagostino.com

© 2023 DAN D'AGOSTINO MASTER AUDIO SYSTEMS, LLC. ALL RIGHTS RESERVED.

THIS CHANGES THE GAME

RE-DEFINING THE ART OF THE POSSIBLE IN CROSSOVER DESIGN

Music is not sine waves. It is a complex series of transients where the timing of each impulse determines the difference between a basic stereo image or one where the venue walls and each performer are clearly etched in three-dimensional space.

Dr. Roland Gauder has devoted more than 30 years to designing and building some of the finest loudspeakers in the world. With the help of Germany's most powerful supercomputer, Dr. Gauder has invented a new form of crossover with near perfect time alignment. Crossover slopes of 60dB/octave keeps each driver operating in its ideal range, while the newly invented Time Delay Circuit (TDC) moves them in perfect synch.

In 2023, the new TDC crossovers proved to be so revolutionary that Dr. Gauder decided to add them into all four lines of Gauder Akustik loudspeakers. To experience “goosebump reality,” come hear the new Arcona Mk II, Capello, Berlina Black Edition, and DARC Mk II series speakers from Gauder Akustik.

GAUDER AKUSTIK

HEAR IT AT AXPONA
ROOMS 1632 (ASTER SUITE) & 1628

Visit axissaudio.com or call 866-295-4133 to find an authorized Gauder Akustik dealer nearest to you

AXISS AUDIO
axissaudio.com

JASON VICTOR SERINUS

Linn Klimax Solo 800

MONOBLOCK POWER AMPLIFIER

For reasons that have as much to do with why the creek does or doesn't rise as anything, almost all the UK-manufactured electronics I've reviewed over the years were from dCS of Cambridge. Through 2023, no electronics from Linn or a host of other UK-based companies have crossed the threshold of my music room.

That situation changed when, soon after New Year's, a pair of Linn's 60lb Klimax Solo 800 monoblock amplifiers ($90,000/pair) arrived from Scotland. Right away, they delighted me with their ease of maneuverability, handsome, uncluttered look, and relative compactness. Given their impressive power output—400W into 8 ohms, 800W into 4 ohms, and a whopping 1.2kW into 2 ohms—the Klimax Solo 800s set a record for highest price per watt and per pound among class-AB monoblocks I've reviewed.

The Klimax Solo 800 had not yet been released when an early pair arrived for review. Information about it began to appear online only well after the review period began.[1] There is no manual, because every Linn product is dealer-installed: It's the dealer's responsibility to make sure you're well-informed. Besides, "the amp is designed to plug-and-play, as it were," Brand Manager Joe Rodger told me in an email. For those who want something to read, a "Linn Docs" wiki for the Solo 800 can serve as what Rodger termed a "no-frills encyclopedia."[2]

Every recording of great artistry I heard sounded coherent, ordered, perfectly in place, and musical to a T.

To learn about the Solo 800, I Zoomed with Murray Smith, the electronics team leader who initiated the project that led to the Klimax Solo 800 and who worked on its Adaptive Bias Control system, and Linn Senior Electronic Design Engineer Nina

1 See linn.co.uk/us/power-amps/klimax-solo-800.

2 See docs.linn.co.uk/wiki/index.php/Power_Amplifier/Klimax_Solo_800.

SPECIFICATIONS

Description Solid state class-AB monoblock amplifier with 2kW Utopik power supply, 20A IEC connector, and Adaptive Bias Control. Inputs: one each balanced (XLR) and single-ended (RCA). Output: One pair Furutech 4mm FT-816(R) banana/spade binding terminals. Passthrough: One single-ended (RCA), one balanced (XLR). Rated output power: 400W into 8 ohms, 800W into 4 ohms (both equivalent to 26dBW), 1.2kW into 2 ohms (24.8dBW). Nominal gain: 26.6dB unbalanced, 22.6dB balanced. Bandwidth: 150kHz into 8 ohms, 140kHz into 4 ohms, 130kHz into 2 ohms, –3dB. Output impedance: 0.10 ohm at 1kHz. THD+N: 0.0004% at 1kHz, 400W into 8 ohms; 0.0005% at 1kHz, 800W into 4 ohms; 0.0006% at 1kHz, 1.2kW into 2 ohms. IMD (18kHz+19kHz): <–115dB at 100W total into 8 ohms. Power utilization: 2kW max, 100W at idle.
Dimensions 13.78" (350mm) W × 16.22" (412mm) D × 10.55" (268mm) H. Weight: 59.52lb (27kg).
Finish Natural silver or black anodized.
Serial numbers of units reviewed 1593454, 1593390. Designed and built in Scotland.
Price $90,000/pair. Approximate number of US dealers: 35. Warranty: 5 years.
Manufacturer
Linn Products Ltd.,
Glasgow Rd., Waterfoot,
Glasgow, Scotland, UK G76 0EQ.
Tel: +44 (0) 141 307 7777.
Email: helpline@linn.co.uk.
Web: linn.co.uk.

PHOTOS COURTESY OF LINN

Roscoe, the design lead for the Klimax Solo 800. Years ago, Linn sponsored Roscoe's attendance at Cambridge University, providing sufficient industrial electronics manufacturing experience to allow her to take her second- and third-year exams. When she finished her studies, she spent a year or two at Linn, doing some work on the long-discontinued Klout amplifier before moving on.

"It was a really good experience," she said. "It's a good educational system—one that actually gets a design engineer to spend lots of time in manufacturing. You understand how the products that you make are built and learn the implications of the design decisions you make. The process creates reliable products and makes for long-term customers."

New product, new design goals

At Linn, the Klout was followed by the Solo 500. Intended for the smaller power market where the majority of loudspeakers present 4–8 ohm loads, it remains in production after almost 25 years. Eventually, acceding to requests for a higher power monoblock that could drive larger speakers with lower impedances, Linn decided to create a new flagship monoblock that would utilize recent improvements in electronic and component design and architecture. By this time, Roscoe had returned to Linn.

"I think probably the biggest performance advance we were aiming for in the Solo 800—the thing we felt makes a huge difference to a power amplifier—was lower distortion," she said. "We went all out to bring distortion down from every source and choose topologies and components that give you the lowest possible distortion. We were really aiming for the purest signal reproduction. While distortion levels in the older Solo 500 are really quite good, there is room for improvement, especially when amps are driven really hard by large, lower-impedance speakers.

"We were able to do more with more modern architectures and more modern components. Previously, we hadn't really done a lot of the design work necessary to drive difficult speaker loads. Mostly, we'd just aimed at 8 ohm speaker loads rather than at much bigger loudspeakers that sometimes present really difficult loads. We wanted the amp to perform with excellence even when it was

MEASUREMENTS

I performed a complete set of measurements on one of the Linn Klimax Solo 800s (serial number 1593390) with my Audio Precision SYS2722 system.[1] I preconditioned the Solo 800 by following the CEA's recommendation of running it at one-eighth the specified power into 8 ohms for 30 minutes. At the end of that time, the temperature of the top panel was just 81.6°F (27.6°C) and that of the side-mounted heatsinks only slightly higher, at 89.0°F (31.7°C). The Linn amplifier runs cool, especially considering its high rated power.

The Linn amplifier's balanced and single-ended inputs both preserved absolute polarity. (The XLR jack is wired with pin 2 positive.) Linn doesn't specify the Solo 800's input impedance—I measured a reasonably high 7760 ohms from 20Hz to 20kHz for the balanced input, 9930 ohms at 20Hz and 1kHz and 9600 ohms at 20kHz for the unbalanced input. The voltage gain at 1kHz into 8 ohms was 22.4dB balanced and 28.44dB single-ended; these values are close to the specified impedances of 22.6dB and 28.6dB, respectively.

The output impedance, including the series impedance of 6' of spaced-pair cable, was a relatively low 0.17 ohms at 20Hz and 1kHz, rising slightly to 0.187 ohms at 20kHz. As a result, the variation in the frequency response with our standard simulated loudspeaker[2] (fig.1, gray trace) was minimal, at ±0.12dB. The response into resistive loads was flat in the audioband, not reaching –3dB until 90kHz into 8 ohms (blue trace). The rise in output impedance with increasing frequency means that into 2 ohms, the output was down by 3dB at

1 See stereophile.com/content/measurements-maps-precision.

2 See stereophile.com/content/real-life-measurements-page-2.

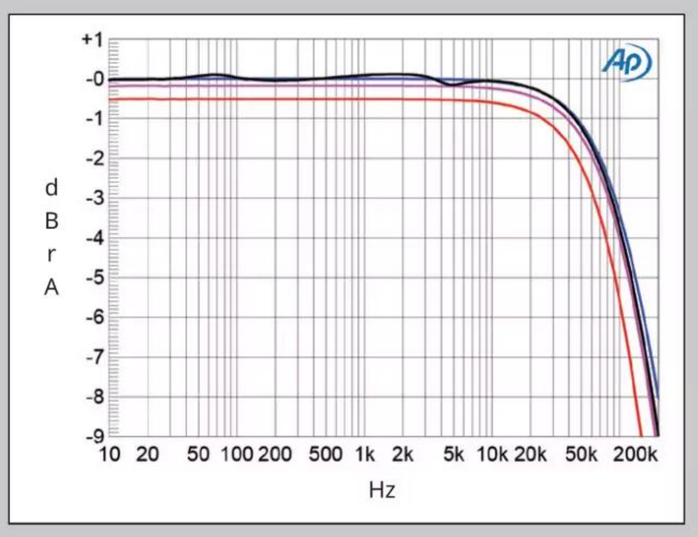


Fig.1 Linn Klimax Solo 800, frequency response at 2.83V into: simulated loudspeaker load (gray), 8 ohms (blue), 4 ohms (magenta), and 2 ohms (red) (1dB/vertical div.).

Genuine GoldenEar

Honoring our rich history while moving boldly forward…

The **T66** — an all-new GoldenEar floorstander with powered bass.

Many important sonic and visual refinements distinguish the new T66 from previous GoldenEar speakers.

Foremost is a dramatically improved crossover design, Noise-Dissipation enabled distortion-minimized internal wiring, two sets of binding posts for BiWiring, a strongest-yet cabinet with see-through metal grille, and an easily adjustable sturdy cast-aluminum base with a choice of spikes or soft feet.

In addition to GoldenEar's trademark Gloss Black finish, the T66 is also available in vibrant Santa Barbara Red.

Genuine GoldenEar, dramatically evolved — a speaker to live with and to love.

Available now.

GoldenEar™

PUBC 2021
TONE Publisher's Choice Award

...Alan Shaw's Masterpiece"

Audiophilia
PRODUCT OF THE YEAR
WINNER | 2021

EX VAL 2021
TONE Exceptional Value Award

audiophile REVIEWERS CHOICE

Harbeth XD

stereophile RECOMMENDED COMPONENT 2022 CLASS A

"...nothing short of stunning..."

2021 the absolute sound EDITORS' CHOICE AWARDS

2022 the absolute sound EDITORS' CHOICE AWARDS

fidelisdistribution.com
603-880-4434

Fidelis distribution, llc

stereophile RECOMMENDED COMPONENT 2021

American Sound

Distributor of World-Class High-End Audio

WORLDWIDE

RETHM

USA

GLANZ

American Sound Distribution
Richmond Hill, ON CANADA
Dealer Inquiries
(905) 773-7810
www.audiopathways.com
angie@americansound.com

NORTH AMERICA

ANALOG RELAX

avantgarde ACOUSTIC

Phasemation

SUPREME - ANALOG

CANADA

AIR TIGHT

FRANCO SERBLIN

JEFF ROWLAND DESIGN GROUP

RSX™ RSX TECHNOLOGIES

SHELTER

VAC

WADAX

Western Electric

YUKI YUKISEIMITSU AUDIO

working really hard."

Many engineers initially focus on measurements as they build prototype after prototype. Once their measurements are the best they can achieve, they turn their attention to sound quality, "tuning" the sound. Roscoe and her team proceeded differently.

"We didn't really feel we needed to tune the amplifier sonically," she said. "We designed for very, very low distortion levels, very low noise levels, wide bandwidth, and low output impedance, all of which are obviously measurable. Then, when we listened to the design, we felt that it sounded so clear that there didn't seem to be reason to do more. I don't know what we would have tuned really. We didn't feel like we could improve it by listening to it and changing something empirically. Instead, we heard what you would expect from an amplifier that measures as well as the Solo 800 does. It really seemed to pick out music better.

"Ultimately, when 'tuning' the sound by listening and modifying the design, designers usually select which distortion is least offensive to the ear. However, when there is so little distortion there, this becomes a more meaningless exercise."

Short of resorting to class-D (which obviously they did not do), how could Linn get so much power out of an amplifier that weighs a teeny bit less than 60lb, is relatively small, and manages to run at a stable, cool temperature without the use of a fan?

"The amp weighs enough and is big enough to ensure it runs at a nice, cool temperature with maximum volume levels and average kind of music,"[3] Roscoe said. "The fins, which are machined from a solid block of aluminum, are vertical; this design allows a lot of air to move up through them. We've also got vents underneath the bottom plate and in the groove around the lid. We tried different heights and sizes of the heatsink until we perfected a design that sucks air up from underneath to help cool the transformers in the switching power supply and the driver transistors on top inside of the board."

A switching power supply

"We also use an efficient switching power supply. We at Linn feel quite strongly that switching power supplies are a superior way of powering an amplifier because all the power supply noise moves out of the audio band. Our switching power supplies maintain very high switching frequencies that can't come near the audio band. The 50Hz, 60Hz, and 120Hz [supply-related spuriae] are very low in these amps, and the power supplies are very efficient."

Roscoe said that linear power supplies require very large transformers, which are very inefficient. "The first problem with a linear power supply is that it's working at 50 or 60Hz, which is right in the audio band. When you try to filter the noise and get ready to power an audio amplifier, generally what happens is you get a certain amount of mains noise and frequency leakage. ... It delivers DC voltage to the output, which then needs to be converted/regulated down to the lower voltages needed to power a lot of the circuitry in the amp. Doing this throws away quite a bit of power. ... Switching power supplies ... upconvert the power frequency to create a very high-frequency AC signal that requires a much smaller transformer. With a lot less copper and much smaller cores, switching transformers generate less heat and operate faster, at higher frequencies.

"Some people in the audio world don't like switching power supplies because they switch very fast and, in their opinion, create a lot of switching noise. If that noise does end up in the audio band, it can make things worse. That's why we make sure the switching frequency is way beyond anything that the human ear is ever going to pick up, even when we deliver 1.2kW into a 2 ohm load."

"I think the reason switch mode power supplies have gotten a bad rep in the audio world is that they were originally used mainly for computers and other applications where their kind of electrical noise levels weren't that important," Smith said. "You can't just stick a switching power supply from a computer into an amplifier

3 When asked to define "average," Roscoe said, "What I meant by 'average' is really the standard 12dB 'crest factor' which is usually applied to music. It dictates the average power handled by a power amplifier when operating just below clipping. Some tracks might push the amp a bit harder, but so far nothing has really managed to get them really hot, even while driving challenging 'difficult' speakers."

measurements, continued

63kHz. With its wide small-signal bandwidth, the Linn's reproduction of a 10kHz squarewave into 8 ohms featured very short risetimes (fig.2) with no overshoot or ringing.

Although low-level ultrasonic noise was present in the Solo 800's output—this was not affected when I connected the grounding terminal on the amplifier's rear panel to the Audio Precision's chassis ground—the unweighted, wideband signal/noise ratio (ref. 1W into 8 ohms), taken with the single-ended input shorted to ground, was a good 65.6dB. This ratio improved to an excellent 95dB when the measurement bandwidth was restricted to 22Hz–22kHz and to 99dB when A-weighted. Spectral analysis of the low-frequency noisefloor while the Linn drove a 1kHz tone at 1W into 8 ohms (fig.3) revealed very low levels of both random noise and of AC supply–related spuriae.

Linn specifies the Solo 800's maximum power as 400W into 8 ohms, 800W

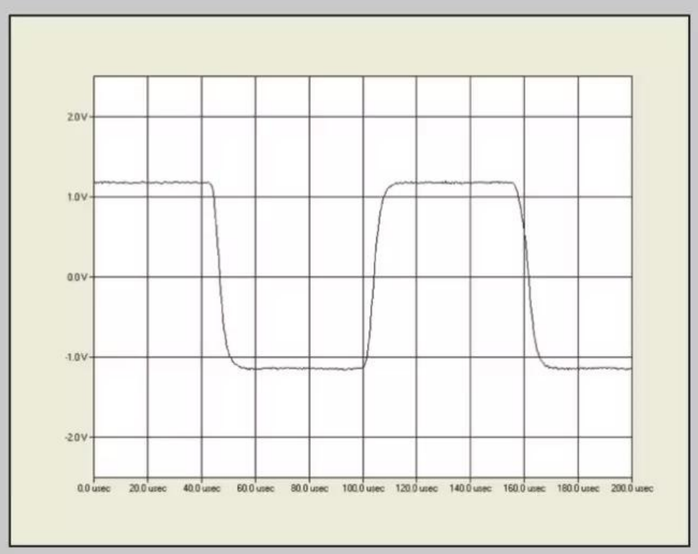


Fig.2 Linn Klimax Solo 800, small-signal 10kHz squarewave into 8 ohms.

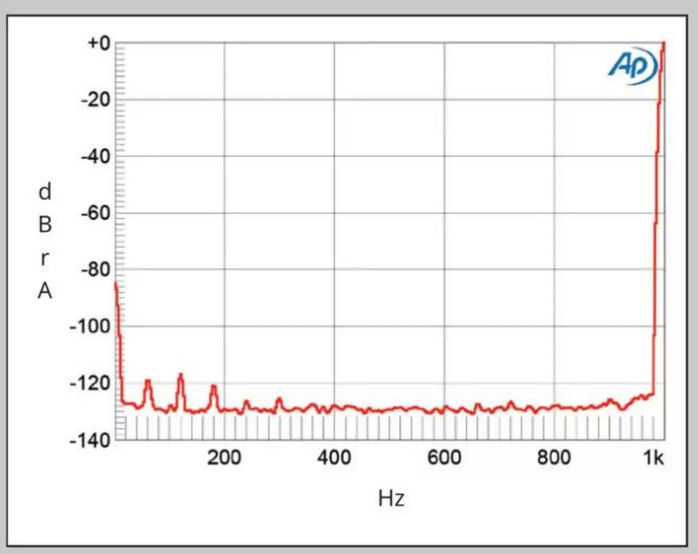


Fig.3 Linn Klimax Solo 800, spectrum of 1kHz sinewave, DC–1kHz, at 1W into 8 ohms (linear frequency scale).

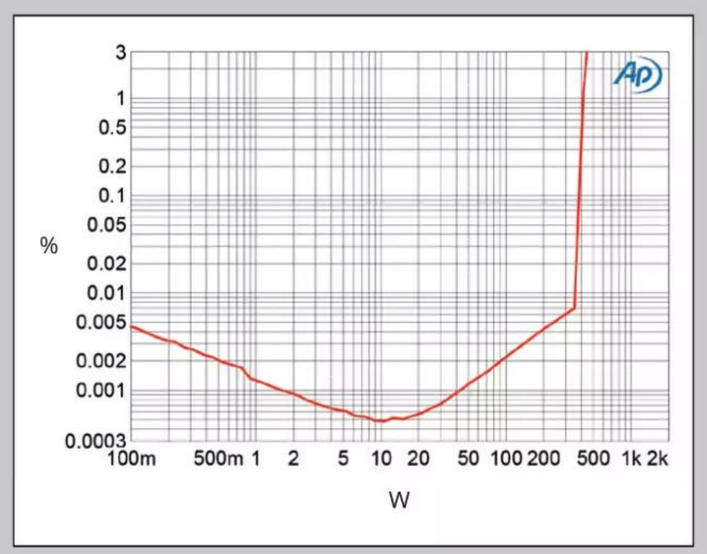


Fig.4 Linn Klimax Solo 800, distortion (%) vs 1kHz continuous output power into 8 ohms.

2024
the absolute sound
EDITORS' CHOICE
AWARDS

Award Winners

VALOR, V SYSTEM and AERIS XD with
Wavelet 2, Focus XD, Focus SE

AXPONA

April 12-14, 2024
Renaissance Schaumburg, IL
Utopia A

To request pricing or nearest dealer location:
legacyaudio.com I 800-283-4644 I info@legacyaudio.com I Springfield, IL USA

and achieve a good result. ... You really have to understand all the principles behind them before they can meet all the myriad audio requirements of being silent and noise free.

"Linn has been using switching power supplies for a number of years. Designing them properly for audio requires a lot of hard-to-find, specialized skills. ... We take the money that other manufacturers usually spend on the iron and copper in their big transformers and spend it on sophisticated electronics instead."

A problem with linear supplies, Smith told me, is that because they operate at mains frequencies of 50 or 60Hz, their noise falls right in the audible range: 60Hz and its lower-order harmonics. This is often heard as a low-level hum or buzz. Finally, "traditional linear transformer supplies also lack any form of regulation. As a result, their output voltage is at the mercy of the mains voltage in your house.

"Short of buying a large mains generator to keep voltage constant, a good audio switch-mode power supply can keep voltage constant without dumping audible noise into the audio band. Instead of taking power in short pulses, switching power supplies can be designed using a Power Factor Correction circuit, which draws power in an even and consistent way, creating no more disturbance than an old incandescent light bulb (albeit quite a big one). That makes the amplifier a much better citizen on your mains network. It's far less likely to interfere and interact with household appliances or other components in a hi-fi system. Switch mode power supplies also feed the output they generate back into a control circuit that maintains constant and steady output voltage, thus protecting your audio output from any disturbance on your mains supply."

Adaptive Bias Control

While developing the Klimax Solo 800, Smith helped develop Adaptive Bias Control to address the crossover distortion created in class-AB amplifiers when the set of transistors that generates the positive half of the musical waveform hands over the signal to the set that generates the negative half. As Smith explained during an extremely cogent discussion, "We have this handover problem as the signal crosses through zero while it goes from positive to negative."

All linear amplifiers apply a bias voltage across the output transistors to set bias current during crossover. The applied bias must constantly adapt to compensate for the changes in temperature, voltage, and current that transistors undergo as they react to the signal passing through them, while also accommodating aging effects.

"It's almost impossible to do that with exact correctness," Smith said. "If you have too much correction, then you can end up with thermal runaway, where the devices just get hotter and hotter until they destroy themselves. That's why most compensation schemes are deliberately 'detuned': to make them safe. In addition, as the amplifier warms up, distortion characteristics can change. Quite often, that's the reason for long warm-up times in amplifiers: They may need a certain amount of time to settle to a good performance characteristic.

"Because no two transistors are the same, transistor circuits need adjustment from amplifier to amplifier in order to maintain correct bias. ... With Adaptive Bias, we measure the bias condition of the transistor and then use a digital control algorithm to maintain bias at a completely constant level regardless of temperature or transistor type. ... It's not an easy thing to do in a purely analog sense because the signals that you need to measure aren't easy to extract. The bias signal that we want is mixed in with the music signal within the amplifier."

Linn monitors the current flowing in the output transistors and uses a digital algorithm to extract the bias signal from the music signal. "That allows us to control that parameter on its own," Smith explained. "It's something that you can only achieve by having good knowledge of traditional analog amplifier design, digital electronics, and digital signal processing. It's a kind of marriage of two different worlds. Digital signal processing is my specialty, so that's the part of the design I was involved in."

He emphasized, though, that the audio signal is *not* digitized.

measurements, continued

into 4 ohms (both powers equivalent to 26dBW), and 1.2kW into 2 ohms (24.8dBW). *Stereophile* defines an amplifier's clipping power as when the THD+noise reaches 1%. With that criterion, the Solo 800 slightly exceeded its specified powers into 8 ohms (410W, 26.1dBW, fig.4), into 4 ohms (805W, 26.05dBW, fig.5), and into 2 ohms (1260W, 25.0dBW, fig.6). These high clipping powers were achieved even though the wall voltage had dropped from 117V AC with the amplifier idling to 113.6V AC at clipping into 2 ohms.

The downward slope of the traces at low powers in figs.4–6 is due to actual distortion lying beneath the random noisefloor. I therefore examined how the THD+N percentage varied with frequency at 20V, which is equivalent to 50W into 8 ohms, 100W into 4 ohms, and 200W into 2 ohms. The THD+N percentage was very low into 8 ohms (fig.7, blue trace) but slightly higher into 4 ohms (magenta trace) and 2 ohms (red trace). The THD+N percentage doesn't

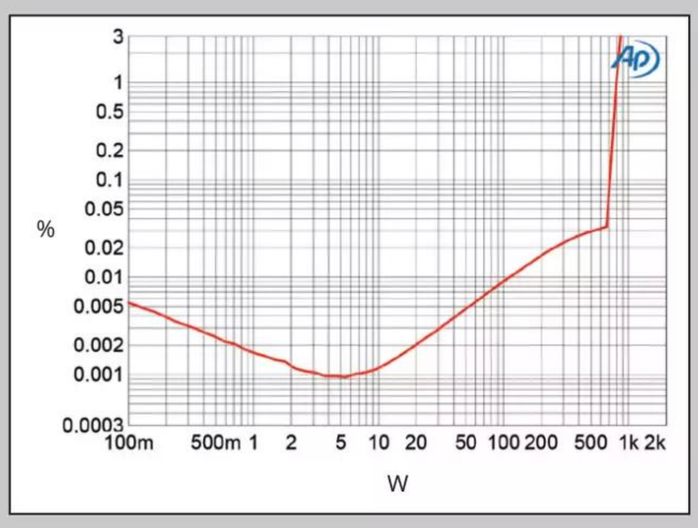


Fig.5 Linn Klimax Solo 800, distortion (%) vs 1kHz continuous output power into 4 ohms.

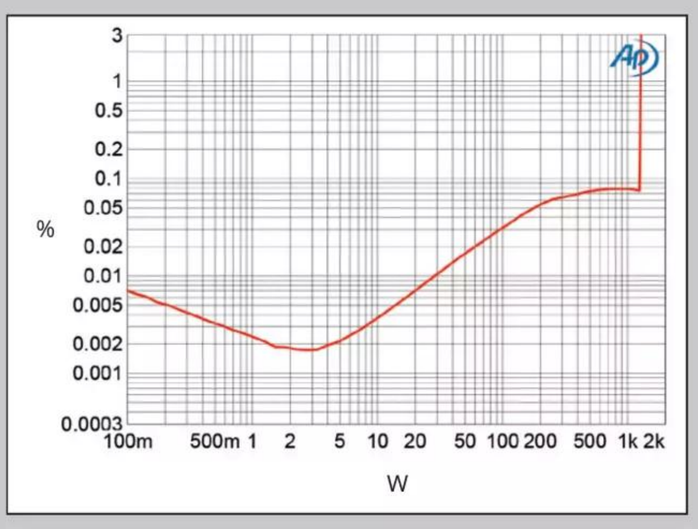


Fig.6 Linn Klimax Solo 800, distortion (%) vs 1kHz continuous output power into 2 ohms.

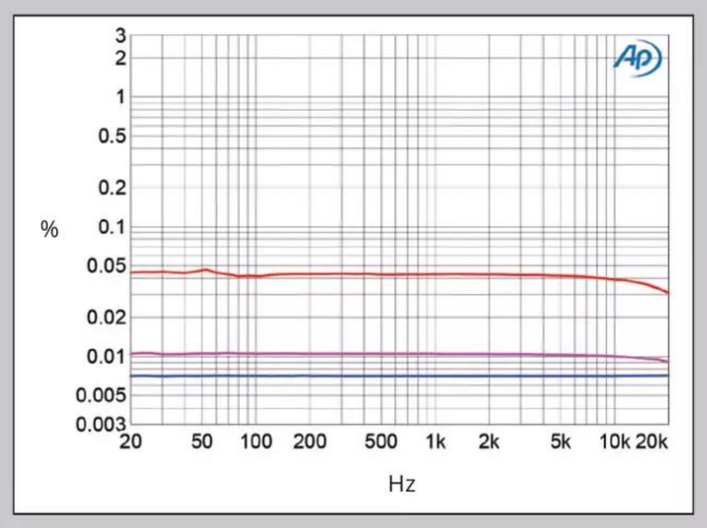


Fig.7 Linn Klimax Solo 800, THD+N (%) vs frequency at 20V into: 8 ohms (blue), 4 ohms (magenta), and 2 ohms (red).

PLAYBACK distribution

See us at AXPONA 2024

5 rooms showcasing these must-see brands!

Vienna acoustics · ESOTERIC · TEAC · ADVANCE PARIS

PMC® · ESPRIT · Quadraspire · amphion®

ROOMS:

#1229 TEAC, Amphion
#1230 Amphion, Esoteric
#1233 PMC, Esoteric Grandioso, Quadraspire
#1424 Vienna Acoustics, Advance Paris
#1434 Advance Paris, PMC, Esprit

We strive for excellence, innovation, and a deep appreciation for the transformative power of music

www.playbackdistribution.com @playbackdistribution

"The signal path remains completely analog. But we have digital assistance to ensure the amplifier performs consistently and runs at its best. It's almost like the engine-management system in a car. ... We have a completely linear transistor amplifier with a digital engine-management system that is keeping operating conditions constant and ensuring that performance is always optimal."

Other engineering goodies

I asked Roscoe how much power the Klimax Solo 800 outputs in class-A before switching to class-B and if the number fluctuates with the ohm rating of loudspeakers. "By controlling bias current at the optimum value, the Klimax Solo 800 suffers far lower distortion than an amp which operates in class-A up to a higher, more arbitrary power level. I would therefore say that the changeover power level from class-A to class-B is not relevant for the Solo 800 because you will simply not hear it.

"We've thought about each stage of the amplifier, paid lots of attention to every tiny little detail, and followed really good engineering practice, as we've done everything we can to minimize distortion by choosing the lowest distortion topologies. ... The Klimax Solo 800 has eight pairs of parallel devices, eight on each side, that share all the current. This reduces the amount of distortion that you get in each of those devices. In addition, we apply a little correction signal for any distortion that manages to creep in at the output. In short, we adjust distortion inside the amplifier to the absolute lowest that we can, and then reduce that tiny distortion still further with the error-correction loop. That's a big part of how we end up with such high performance in the amplifier.

"The way we've mechanically coupled the devices to the heatsink enables us to share the heat very nicely across those devices so that we have very low differential between the junction temperature inside the transistors and the heat on the heat sink," Roscoe said. "That results in a good thermal interface between the transistor and the metal. Even when the transistors work extremely hard, they run at a nice, low temperature."

Smith had a final comment, about impedance. "A lot of speakers drop to what an amplifier designer might consider frighteningly low impedance levels. You can see them on John Atkinson's impedance plots. One of our goals was to drive such speakers while maintaining very low levels of distortion. That accounts for the amplifier's size and for the number of output devices necessary to deliver sufficient current to very demanding loudspeakers."

Layout and setup

The amp's support feet, derived from those on Linn's flagship Klimax DSM network music player, are machined stainless steel with an impressed silicone O-ring to aid isolation. Their height ensures that Linn's natural convection cooling process functions as intended. Nonetheless, Rodger gave me the okay to try aftermarket feet, noting that during the design process, Linn listened with its own feet and "very standard interconnects and speaker cable."

measurements, continued

rise at the top of the audioband, which suggests that the amplifier has commendably wide-bandwidth open-loop gain.

The distortion waveform was predominantly the third harmonic (fig.8), with no crossover distortion spikes at the waveform's zero-crossing points. The third harmonic lies below –100dB (0.001%) into 8 ohms (fig.9) but rises to a still-low –84dB (0.006%) into 4 ohms (not shown). Even at a peak power of 100W into 4 ohms, the high-order intermodulation products with an equal mix of 19 and 20kHz tones all lay at or below –90dB (0.003%, fig.10). Commendably, the second-order difference product at 1kHz lay close to –120dB (0.0001%).

The Linn Klimax Solo 800's measured performance is one of the best I have encountered, offering very high power with extremely low levels of noise and distortion. Wow!—**John Atkinson**

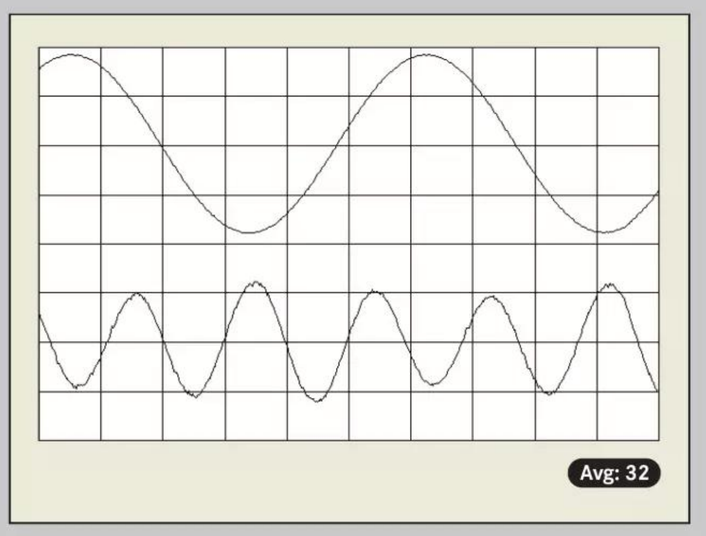


Fig.8 Linn Klimax Solo 800, 1kHz waveform at 50W into 8 ohms, 0.0028% THD+N (top); distortion and noise waveform with fundamental notched out (bottom, not to scale).

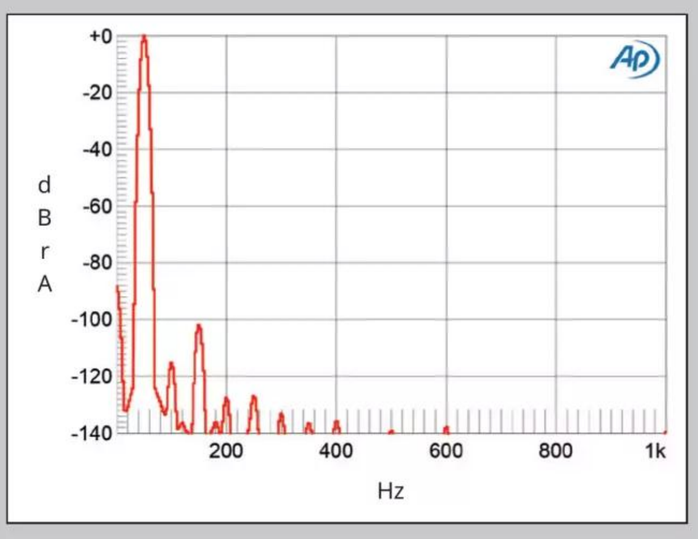


Fig.9 Linn Klimax Solo 800, spectrum of 50Hz sinewave, DC–1kHz, at 50W into 8 ohms (linear frequency scale).

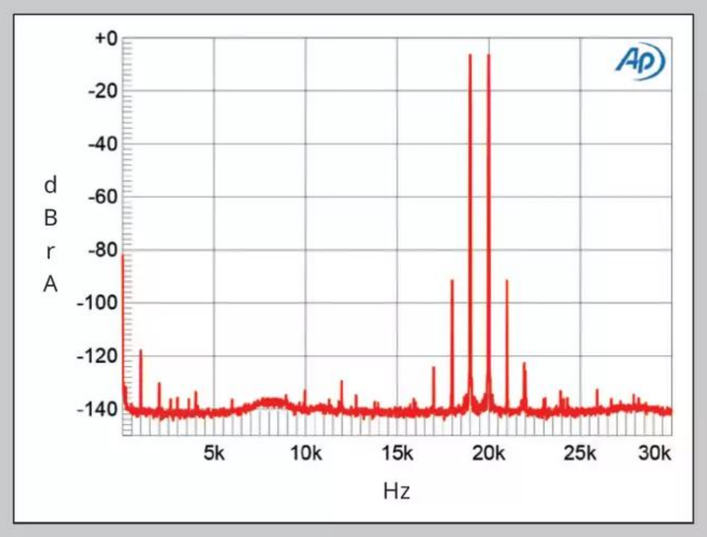


Fig.10 Linn Klimax Solo 800, HF intermodulation spectrum, DC–30kHz, 19+20kHz at 100W peak into 4 ohms (linear frequency scale).

DS Audio

THE FUTURE OF ANALOG MUSIC JUST GOT MORE AFFORDABLE

HANDMADE
IN JAPAN

musicalsurroundings.com 510.547.5006

MUSICAL SURROUNDINGS 33 1/3
EST. 1991 - OAKLAND, CA

More on this topic follows.

Linn doesn't think the Klimax Solo 800's Utopik power supply requires external power conditioning, and Rodger doesn't think the monoblock will feed back noise into the line. "That said, if an end user wants to employ a high-end [power] conditioner, and they like what it does to the sound of the whole system, we have a saying in Scotland: 'Fill your boots,' which means 'that's your prerogative, so go for it.'"

Upon receiving the Linns, I was advised to leave them on 24/7. Standby kicks in after 20 minutes of silence; when it happens, what Rodger called "a jaunty little animation" appears on the tastefully illumined LED roundel in the center of the front panel.

Much later, Smith told me that warm-up matters very little. "The whole point of the Adaptive Bias Control system is to remove the need for thermal performance dependencies. The system ensures that the amp is ready to go within a few seconds of turning it on from the front. That's why we made the power switch accessible from the front: to encourage customers to save money and a small bit of the planet."

The illumination of the Linn roundel on the amp's front is adjustable via a switch on the rear panel; I kept it on its lowest setting. The roundel's 100 cool-toned LEDs blink when the amp is first turned on, light up when you play music, and turn red if something goes badly wrong. The main power switch is on the bottom front of the amplifier, a bit toward the right side. Because I only learned at the end of the review period that the amps would perform optimally immediately after turning them on, I left them on 24/7 most of the time. I routinely preceded critical-listening sessions with an Isotek break-in/demagnetization sequence.

Linn supplies a pair of "attachable handles to facilitate safe lifting" and cautions that "the amplifier should always be lifted by **two**[4] people." Nonetheless, because the amp's weight is evenly distributed, I found it easy to dispense with the handles and lift its 60lb bulk on my own. My D'Agostino Momentum HD preamp only has balanced outputs, so I only used the Klimax Solo 800s' balanced inputs and set the input button on the rear panel accordingly.

I placed the monoblocks on the same Wilson Pedestals I usually position between my reference amplifiers and Grand Prix amp stands. When I learned that Linn's attached footers were specially designed for vibration isolation, I removed the Pedestals and compared the sound. As much as I liked the warmth and solidity that Linn's attached footers brought to the midrange, the Pedestals widened and deepened the soundstage, enhancing my listening pleasure.

Beyond the choice of supports, I experimented with some very different-sounding, top-level power cables—Kimber, Nordost, and AudioQuest—until I found what sounded best in my system and room. Networking wizard Sean Tan suggested that I replace the Finisar SFP fiberoptic transmitters/receivers/transceivers in my Small Green Computer/Sonore deluxe optical module and UpTone Audio EtherREGEN with new Broadcom/Avago Gen 5 SFPs. After several A/B/A comparisons,[5] some of which also involved power cable swaps, I felt that while the Finisars delivered a warmer and fatter midrange and somewhat wider soundstage, the Broadcom/Avagos excelled in fine detail, resolution, overall clarity and focus, and weight and solidity in the lower midrange and bass. Readers who transmit signal over long distances by using SFPs to convert Ethernet to optical and back again would do well to check these new babies out.

Happiness

I've been blessed lately with a succession of superb amplifiers for review. Given such an embarrassment of riches, I wondered whether the comparatively lightweight Linns could hold their own. It didn't take long to find out that they did, as different as they sounded from the others.

From first listen, the Linn Klimax Solo 800 impressed as one of the most neutral monoblocks I've reviewed. Dynamics were considerable if not overwhelming in their extremes, resolution was very fine, and color differentiation was notable. Every recording of great artistry I heard sounded coherent, ordered, perfectly in place, and musical to a T.

A case in point: On Gidon Kremer and Kremerata Baltica's "Kaddish-Prelude" from the recently released and reviewed *Songs of Fate* with soprano Vida Miknevičiūtė (24/96 WAV download, ECM),[6] the natural sound of percussion and instruments won me over immediately. Everything sounded as I know it to sound in live performance without added glitz, glamour, or edge.

I especially loved what the Linns did with voice. Miknevičiūtė sounded excellent on "The Star of David: David's Lamentation." Resolution and clarity were superb. On one of those evenings when I could not stop listening, Qobuz let me move excitedly between the prime voices of Shirley Horn, Leontyne Price, and Jussi Björling. I also assessed Billie Holiday's instrument in various stages of her career before comparing her takes of her own "Strange Fruit" to Carmen McRae's very different yet similarly compelling version. Everything I have gleaned from decades spent listening to these artists on systems from crappy to incredible led me to believe that the Linns were singing true.

On another day, I ventured into baritone territory (and beyond), going all French *mélodie* with the very different voices of Gérard Souzay and Pierre Bernac followed by

4 The bolding is Linn's.

5 My copious thanks to Scott Campbell for helping with this and obviating the need to run back and forth between the detached music room and the second floor office multiple times during each switch.

6 Miknevičiūtė sings Elisabeth in Wagner's *Tannhäuser* at Bayerisches Staatsoper starting May 5.

CLEARAUDIO

Signature

THE NEW STANDARD FOR PERFORMANCE AND VALUE

Encoder Motor Controller, TSC Speed Regulation
Integrated Auto-Calibration, IMS O-ring Motor Suspension

MUSICAL SURROUNDINGS 33 1/3
EST. 1991 - OAKLAND, CA
MUSICALSURROUNDINGS.COM | 510.547.5006

clearaudio
CLEARAUDIO
MADE IN GERMANY

Victoria de los Ángeles, Régine Crespin,[7] Sandrine Piau, Montserrat Caballé, Roland Hayes (caught late in his career), and Eileen Farrell. Farrell, one of Leonard Bernstein's favorite Wagnerians, was singing small-scale French and German songs by Debussy, Poulenc, and Schubert. Before you vocal afficionados conjecture that moving so many heavy amplifiers around has affected more than my back, check out 1960's *An Eileen Farrell Song Recital* with pianist George Trovillo (24/192 FLAC, Sony (Columbia)/Qobuz) and prepare to be amazed at how musical and idiomatic she can sound in this repertoire. Then consider Farrell's *I've Got a Right to Sing the Blues* (24/192 FLAC, Sony/Qobuz), also released in 1960, when she was in prime voice, and her late recordings of the American Songbook for Reference Recordings, produced by Tam Henderson,[8] starting with 1989's *Eileen Farrell Sings Harold Arlen* (16/44.1 FLAC, Reference Recordings/Qobuz). For a chaser, try her remarkably full-voiced, Grammy Award–winning Wagner disc of Brünnhilde's "Immolation Scene" from *Götterdämmerung* and the *Wesendonck Lieder* with Leonard Bernstein and the New York Philharmonic, captured in wide-stage, three-dimensional sound (24/192 FLAC, Sony/Qobuz).

A reviewer must eventually return to the tried and true. Bass was quite fine and inner lines fleshed out nicely at the start of Rafael Payare and Orchestre Symphonique de Montreal's oft-referenced recording of Mahler's Symphony No.5 (24/96 FLAC download, Pentatone). Again, the sound's integrity won me over. I've reviewed amplifiers that deliver weightier, denser images but few through which timbres sound so true.

As I spent more time with the Linns, I began to find the words to describe a distinctive aspect of their presentation. They are a bit less forthright than either of my reference monoblocks. Their flow and balance—the way they present pitch, pace, rhythm, attack—is supremely musical, but they don't announce their presence with a big voice and a puffed-out chest. They come across as a bit more reserved but equally formidable and rewarding. Lest I anthropomorphize beyond all reason, suffice to say that they made me feel comfortable and at home with every piece of music they (re)produced. A finer compliment I know not how to deliver.

Friend Scott brought over a fresh playlist of oldies. I am not a fan of Joe Jackson's "The Verdict" from *Body and Soul* (16/44.1 FLAC, EMI/Qobuz), whose sonics reflect its early digital provenance; Scott, though, loved its wide soundstage and jangly energy. I really dug the digital transfer of tenor saxophonist Ike Quebec's 1962 "Loie" (Rudy Van Gelder Edition/2007 Digital Remaster), from *Bossa Nova Soul Samba* (16.44.1 FLAC, Blue Note Records/Qobuz), and "Don't Take Your Love from Me" from his 1962 record *Blue & Sentimental* (24/96 FLAC, Blue Note Records/Qobuz). The latter won me over with the sax's warmth and natural bite on top and the rich timbre of Grant Green's guitar.

Another listening session, this one with Dr. Gary Forbes, found me revisiting René Marie's "This is (Not) a Protest Song" from *Sound of Red* (24/96 FLAC, Motema Music/Qobuz). The first time we played this, with different amplification and the SFP modules in the optical network, my response was ho hum. This time, the clarity, warmth, and beauty of her voice through the Linns made me a convert to the Church of René. An hour later, we ended our audition with the marvelous Catherine Russell (whom I've interviewed and seen live). I've never heard her sound as good. If you have only time and bandwidth to take one thing away from this review, head to your system and stream Ms. Russell's "You've Got the Right Key but the Wrong Keyhole" from *Harlem on My Mind* (24/96 FLAC, Jazz Village/Qobuz). It could serve as a political anthem of sorts.

Got the picture?

Some will question the price of these innately musical, highly refined amplifiers. I gave up trying to figure out why quality products cost what they do years ago and leave pronouncements of "good value" to those willing to stick their necks out farther than I am. Given how far my neck already sticks out, I stick to reporting what I hear and how it makes me feel. If a product reproduces music in ways that bring me joy, I say so, irrespective of its cost.

For musical flow and truth in reproduction, the Linn Klimax Solo 800 mono power amplifier joins a select list of the finest monoblocks I've had the joy to review. It may be the lightest first-class class-AB amplifier of the lot, but it's also one of the best. Try to visit a Linn dealer or show where they're set up properly and mated with components and cabling of comparable quality, run them through their paces, and then write the next paragraphs in your own words. I'm confident your own account will complement my own and my Class A recommendation. ■

ASSOCIATED EQUIPMENT

Digital sources dCS Vivaldi Apex DAC, Vivaldi Upsampler Plus, Vivaldi Master Clock, and Rossini Transport; EMM Labs DV2 Integrated DAC, Meitner MA3 Integrated DAC; Innuos Statement Next-Gen Music Server; Small Green Computer Sonore Deluxe opticalModule; Uptone Audio EtherREGEN with SOtM sCLK-OCX10 Master Clock and sPS-500 power supply; Finisar FTLF8519P3BNL and Broadcom/Avago AFBR-5718PZ 1GB SX-SFP, Gen 5 fiberoptic modules; Nordost QNet switch and QSource linear power supplies (2); Sonore Audiophile Linear Power Supply; Synology 5-bay 1019+ NAS with Ferrum Hypsos linear/switching hybrid power supply; Linksys MR9000 mesh router and Arris modem; Apple 2023 iPad Pro and 2017 MacBook Pro laptop with 2.8GHz Intel i7, SSD, 16GB RAM.
Preamplifier Dan D'Agostino Momentum HD.
Power amplifiers Dan D'Agostino Momentum M400 MxV monoblocks, Accuphase A-300 monoblocks.
Loudspeakers Wilson Audio Specialties Alexia V with Lōke subwoofers.
Cables Digital: Nordost Odin 1, Odin 2, and Valhalla 2 (USB and Ethernet), Frey 2 (USB adapter); AudioQuest WEL Signature; Wireworld Platinum Starlight Cat8 (Ethernet), OM1 62.5/125 multimode duplex (fiberoptic). Interconnect (XLR): Nordost Odin 2 and Blue Heaven subwoofer, AudioQuest Dragon, Canare (subwoofers). Speaker: Nordost Odin 2, AudioQuest Dragon. AC: Nordost Odin 2, Valhalla 2, Valhalla 1; AudioQuest Dragon and Firebird; Kimber PK10 Palladian. Umbilical cords: Ghent Audio Canare on NAS; QSource Premium DC cables with Lemo terminations for QSources; SOtM sPS-500 umbilical cable for SOtM Master clock.
Accessories Grand Prix Monza 8-shelf double rack and amp stands, 1.5" Formula platform; Symposium Ultra Platform; Nordost 20-amp QB8 Mark III, QKore 1 and 6; Titanium and Bronze Sort Kones, Sort Lifts; Stromtank S 2500 Quantum MK II power generator, SEQ-5 Audio Distribution Bar; AudioQuest Niagara 7000 and 5000 power conditioners, NRG Edison outlets, JitterBugs; Environmental Potentials EP2050EE surge protector/filter; Wilson Audio Pedestals; A/V RoomService Polyflex Diffusers; Resolution Acoustics room treatment; Stillpoints Clouds (8); HRS DPX-14545 Damping Plates; Marigo Aida CD mat.
Dedicated listening room 20' L × 16' W × 9'4" H.
—Jason Victor Serinus

7 Thank you, Sebastian Spreng, for encouraging me to revisit Crespin's *Shéhérazade*.
8 I miss your sometimes quirky but always interesting taste, Tam.

NOTHING BETWEEN YOU AND THE MUSIC

Introducing The New Weiss HELIOS Professional-Grade DAC

HELIOS is a no-compromise DAC that allows you to hear the same representation of the music that mastering engineers hear in the studio.

To achieve its exceptional performance, HELIOS uses an eight-channel 32-bit D/A converter chip, with four paralleled conversion channels per audio channel. All analog processing is done with Weiss's discrete operational amplifier modules, the Weiss OB2-BP – arguably the best audio operational amplifier currently available.

For ultra-stable clocking of the D/A converter, Helios also uses an internal high-precision/low jitter clock generator.

More than just a DAC, Helios also functions as a preamp and UPnP/Roon streamer and includes the same professional-grade DSP algorithms that were used to mix and master the original recordings.

The new HELIOS delivers another breathtaking leap forward in DAC technology. Audition it at your local Weiss dealer and prepare to be astounded.

WEISS

Scan to email us for a dealer near your city or visit bluebirdmusic.com

Bluebird MUSIC

the source for modern hi-fi

DISTRIBUTED IN US AND CANADA BY BLUEBIRD MUSIC LIMITED
TEL 416 638 8207 BLUEBIRDMUSIC.COM

SASHA MATSON

TAD Grand Evolution One

LOUDSPEAKER

Review samples of some new high-end audio products do not grow on trees. They are more like dray horses trouping from one destination to another. After the US premiere of the Technical Audio Devices (TAD) Grand Evolution One (TAD-GE1), a floorstanding speaker from TAD's Evolution series, at the 2023 Capital Audio Fest, the review pair came to stay with me in Upstate New York for a couple of months before traveling on to the 2024 Florida Audio Expo for another public appearance. After that, they returned to John Atkinson for measuring—then off again on another journey.

The TAD Labs GE1 is a three-way, three-driver design. Up top is TAD's proprietary Coherent Source Transducer (CST), a 5 1/2" coaxial tweeter/midrange driver. Two matched 7" woofers fill out the middle of the front panel. On the back are two pairs of speaker taps connected (at the moment) with high-quality jumper cables; those who biwire or biamp are cared for. The GE1 is a bass-reflex speaker; its port fires down. The footers are the usual spiked cones; a set of metal discs is thoughtfully included for those who wish to protect their hardwood floors.

The cabinet stands just shy of 49" tall, constructed out of 40mm-thick MDF panels and 18mm birch plywood bracing. The visual aesthetic is similar to that of a fine grand piano: sides and back finished in shiny black lacquer, the front kitted out in very handsome, glossy-finished olive wood, similar to the inside rims of some high-end pianos. The cabinet edges are smoothly contoured. The cabinets sit atop an attached combo port/plate (more on this in a moment). Including this platform, each speaker weighs 140lb. This is not a compact speaker, but it is hardly overwhelming in scale. The Grand Evolution One is handsome, with a good shot at a Best of Breed ribbon for its shiny coat alone. The physical appearance and bespoke build quality would enhance any interior decor.

The new TAD GE1 obviously shares technology genes with earlier TAD speakers *Stereophile* has reviewed, including the CE1TX standmount re-

SPECIFICATIONS

Description Three-way, bass reflex, floorstanding speaker system. Drive units: Two 7 1/16" (180mm) woofers with aramid-composite cone; coaxial driver with a 5.5" (140mm) magnesium-cone and a 1 2/8" (35mm) beryllium-dome tweeter. Crossover frequencies: 250Hz, 1.8kHz. Sensitivity: 88dB/2.83V/m. Rated impedance: 4 ohms. Max. input power: 250Wpc. Frequency response: 27Hz–100kHz ±3dB.
Dimensions 15 1/2" (394mm) W × 48 13/16" (1240mm) H × 21 1/2" (547mm) D. Weight: 141lb (64kg).
Serial numbers of units reviewed CJMM000010WM/CJMM000009WM.
Made in Japan.
Price $65,000/pair. Approximate number of US dealers: 75 brick-and-mortar plus 4 online. Warranty: 3 years.
Manufacturer
Technical Devices Laboratories, Inc.,
Bunkyo Green Ct. 2-28-8,
Honkomagome, Bunkyo-ku,
Tokyo 113-0021, Japan.
US distributor: PAD HiFi,
199 Winter St.,
Hanover, MA 02339.
Tel: (781) 982-2600.
Email: info@padhifi.com.
Web: padhifi.com.

MEET THE NEXT GENERATION

It's taken 10 years for Soulution to improve on the 725. Now the new Soulution 727 is redefining what's possible for preamp performance.

SOULUTION 727 PREAMP

Closer to Reality Than Ever Before

2023 the absolute sound PRODUCT OF THE YEAR AWARD

LOWEST NOISE FLOOR
At -160dB, the 727 sets the new world standard for noise floor, -20dB better than the 725

NEAR PERFECT TIMING
Phase shift of less than 0.1 degrees from 20Hz–20Khz gives 727 unparalleled lifelike imaging

NEW POWER SUPPLY
New breakthrough in power supply architecture reduces energy waste AND greatly extends service life

OPTIONAL PHONO MODULE
Now with greater gain, lower noise, and full logic control of cartridge loading

HEAR IT AT AXPONA | ROOMS 1632 (ASTER SUITE) & 1628

soulution nature of sound

Visit axissaudio.com or call 866-295-4133 to find an authorized Soulution dealer nearest to you

AXISS AUDIO
axissaudio.com

viewed by Herb Reichert recently, the Compact Reference reviewed by John Atkinson in 2012, and two earlier members of the Evolution family, the Evolution One and the Compact Evolution One.[1] The TAD Labs Grand Evolution One is priced at $65,000/pair.

From control rooms to living rooms

There's a dialectic at work in the audio world, one of several, or many. Some companies primarily design for, and sell to, the pro-audio market, including monitoring equipment for studios. Others conceptualize, manufacture, and market wares exclusively for home audio. A few manufacturers, from boutique garage outfits to large international corporations, walk on both sides of the street. Pioneer Electronics in Japan is an example of the latter: In 1978, Pioneer, which had long been associated with affordable hi-fi products, spun off Technical Audio Devices Laboratories (TAD Labs), which focused initially on loudspeakers and drivers meant for use in studios; TAD products were (and continue to be) built in Japan. CEO Shinji Tarutani and Head of Design Toru Nagatani have been with both companies for many years.

TAD's mission expanded when Pioneer hired loudspeaker designer Andrew Jones, who previously worked with KEF, to design products intended for consumers. The first model Jones designed for TAD, in collaboration with Nagatani, was the big Model One. That model featured a coaxial midrange/beryllium tweeter driver. Although Jones has since moved on, current TAD loudspeakers are variations on this theme. The current US distributor for TAD Labs is Pro Audio Design (hence "TAD via PAD"), headed by Dave Malekpour. Dave has a long history in pro-side design including Augspurger studio monitors, which have utilized TAD drivers.

During a long Zoom conversation, Malekpour shared his views about the back and forth between consumer and pro audio. "What

1 You'll find these reviews at bit.ly/CE1TX, bit.ly/TADCR1, bit.ly/TADEvo1, and bit.ly/TADmicroE1.

MEASUREMENTS

I used DRA Labs' MLSSA system, a calibrated DPA 4006 microphone, and an Earthworks microphone preamplifier to measure the TAD Grand Evolution 1's quasi-anechoic frequency- and time-domain behavior in the farfield. I used an Earthworks QTC-40 microphone, which has a small, 1/4" diameter capsule, for the nearfield responses. I examined the loudspeaker's impedance with Dayton Audio's DATS V2 system.

My B-weighted estimate of the GE1's voltage sensitivity was 87.5dB(B)/2.83V/m, which is within experimental error of the specified 88dB/2.83V/m. TAD specifies the GE1's impedance as 4 ohms. The impedance magnitude (fig.1, solid trace) was close to 4 ohms in the upper bass and midrange, rising above 8 ohms for most of the treble. The minimum value is 3.84 ohms at 70Hz. However, the electrical phase angle (fig.1, dotted trace) is occasionally high, which means that the effective resistance, or EPDR,[1] is significantly lower. The EPDR lies below 3 ohms below 30Hz, between 43Hz and 95Hz, between 197Hz and 1183Hz, and above 7kHz. The minimum EPDR values are 1.6 ohms at 27Hz, 1.76 ohms at 56Hz, and 2 ohms at 608Hz. The GE1 is a very demanding load for the partnering amplifier.

The impedance traces are free from the small discontinuities that imply the presence of cabinet resonant modes, and the enclosure's panels seemed inert when I rapped them with my knuckles. The only resonances I found with a plastic-tape accelerometer lay at 293Hz on the sidewalls level with the lower woofer (fig.2) and 379Hz on the top panel and on the front baffle below the woofers. As these modes are both extremely low in level and have a high Q (Quality Factor), I can safely predict that they won't have audible consequences.

The two woofers behaved identically, and the sum of their nearfield responses (fig.3, blue trace) has the expected minimum-motion notch at 32Hz, which implies extended low frequencies. The downward-firing port's nearfield output (fig.3, red trace) peaks slightly below the tuning frequency and, other than slight low-level discontinuities at 150Hz and 300Hz, its upper-frequency rollout is clean. The output of the woofers crosses over to that of the midrange unit (fig.3, green trace) close to the specified 250Hz. There is little

1 EPDR is the resistive load that gives rise to the same peak dissipation in an amplifier's output devices as the loudspeaker. See "Audio Power Amplifiers for Loudspeaker Loads," *JAES*, Vol.42 No.9, September 1994, and stereophile.com/reference/707heavy/index.html.

Stereophile TAD GE1 Impedance (ohms) & Phase (deg) vs Frequency (Hz)

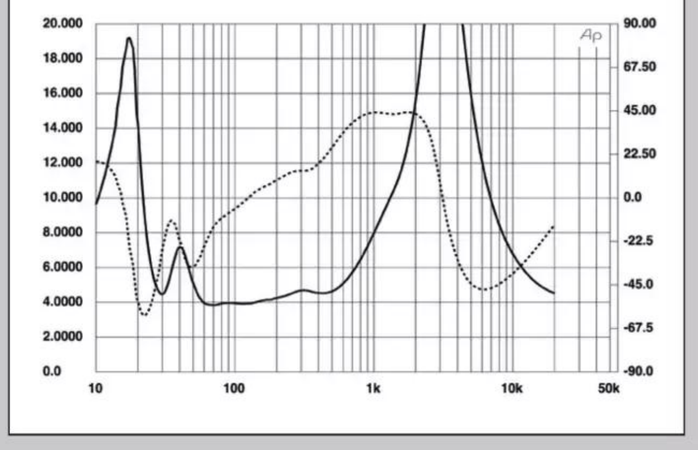


Fig.1 TAD Grand Evolution 1, electrical impedance (solid) and phase (dashed) (2 ohms/vertical div.).

we want in a studio monitor is very different than what we want in a playback monitor. In a studio monitor, we want something that is going to show us all the warts, especially in the midrange where the vocals are. In a hi-fi speaker, we generally want something a little softer in the midrange: We want to show off the music. For example, the Yamaha NS-10 monitors are still widely respected by engineers, but they aren't something you listen to for pleasure. The design brief for the GE1 was to make a gorgeous loudspeaker—gorgeous looking and gorgeous sounding."

Coincidences

One of the most prominent technical features of TAD loudspeakers is the use of their own "coincident" drivers. "Coincident" refers to the specific way TAD designs work; the tweeter is nestled snugly within the larger midrange such that the tweeter doesn't block the center area of the midrange cone. TAD did not invent this approach; that history stretches back to the 1940s, to the development of the Altec Lansing Duplex, which dominated the studio-monitor market in the US. Tannoy's "Dual Concentric" drivers played a similar role in Europe. When properly engineered, concentric drivers can generate highly coherent, in-phase sound originating from a single point in space, over an extended frequency range.

For the GE1's Coherent Source Transducer, a proprietary vapor-deposition technique was used to fabricate the beryllium tweeter diaphragm, which is nestled in the center of that 5 1/2" magnesium midrange cone. According to TAD's specifications, this dual driver, which is isolated in its own cabinet chamber, covers frequencies from the upper bass to the ultrasonic, 250Hz–100kHz.

"The CST driver, being a point-source, has more controlled dispersion than with a domed tweeter," Malekpour said. "When you listen to the speaker, no matter where you place it, you feel like it's aimed at you. The phase response is very even. For the listener, what that means is: smooth. No frequency holes. The big issue with a dual-concentric–type driver is the positioning. The two elements, the midrange and the tweeter, are timed by their positioning. The response is exceptionally linear."

Apart from Tannoy, which still makes concentric-driver speakers, a few other consumer-focused companies take a similar approach. Probably the most prominent is KEF, with its Uni-Q driver array. France's Cabasse is another; the Cabasse La Sphère loudspeaker uses a *four-way* concentric driver. And then there's Fyne, which was founded by several Tannoy veterans.[2]

Considering those sonic benefits, particularly in soundstage and image detail, why don't all loudspeakers use concentric drivers? Because there are tradeoffs. With coincident drivers, the main challenge is modulation distortion. Diffraction and unwanted reflections are also problems, especially at high SPLs, and magnetic field interactions in the motor can also cause problems. TAD's CST driver deals with the magnetic interactions by employing a nonferrous conductive ring to cancel the influence of the magnetic flux from one driver on the other. It deals with the acoustical issues by putting the tweeter behind the midrange, time-aligning them to minimize interactions, and setting the crossover point to the lower-frequency driver so that such "modulation distortion" remains below the threshold of detection.

Appealing to the bass

Speaking of crossover points: The specified crossover frequencies for the GE1's are 250Hz and 1.8kHz. Below 250Hz, that matched pair of 7" woofers kicks in. TAD, which seems to enjoy creating acro-

2 See, for instance, stereophile.com/content/kef-blade-two-meta-loudspeaker and stereophile.com/content/fyne-audio-f500sp-loudspeaker.

measurements, continued

sign of the usual nearfield low-frequency boost in the complex sum of the midrange, woofer, and port responses (fig.3, black trace below 300Hz). This suggests that while the TAD GE1's low-frequency alignment offers excellent extension, it is optimized for articulation rather than maximum bass weight.

The black trace above 300Hz in fig.3 shows the GE1's quasi-anechoic farfield response, averaged across a 30° horizontal window centered on the tweeter axis. Other than a slightly elevated midrange and a slight lack of energy in the presence region, the balance is even. The small peaks and dips between 6kHz and 20kHz are likely due to interference between the output of the coaxially mounted tweeter and the reflections of that output from the midrange cone's surround. The tweeter's response also rises above the audioband, with a peak just below 29kHz. The GE1's behavior in the treble is very similar to that of the TAD CE1TX standmount that HR reviewed in June 2023,[2] which also used a coaxial high-frequency/midrange unit.

The TAD's horizontal dispersion, normalized to the response on the central tweeter

2 See fig.3 at stereophile.com/content/tad-ce1tx-loudspeaker-measurements.

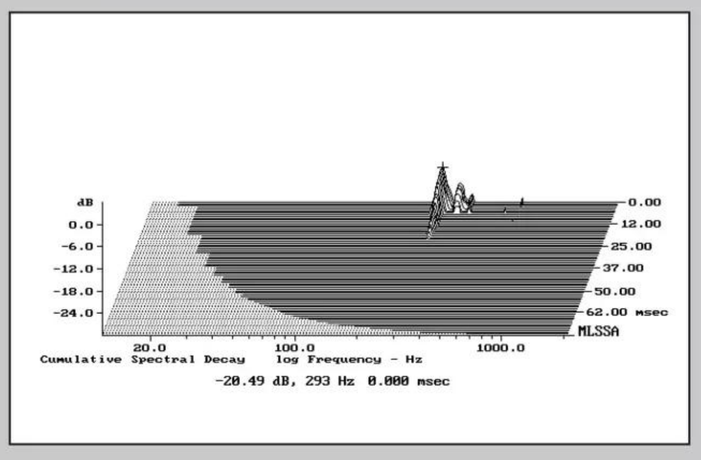


Fig.2 TAD Grand Evolution 1, cumulative spectral-decay plot calculated from output of accelerometer fastened to side panel level with the lower woofer (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz).

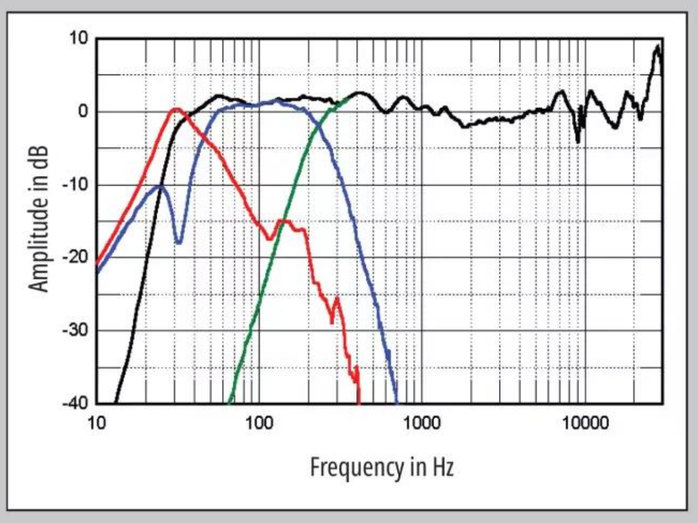


Fig.3 TAD Grand Evolution 1, anechoic response on tweeter axis at 50", averaged across 30° horizontal window and corrected for microphone response, with the nearfield responses of the midrange unit (green), woofers (blue), and port (red), and their complex sum (black), respectively plotted below 340Hz, 700Hz, 420Hz, and 300Hz.

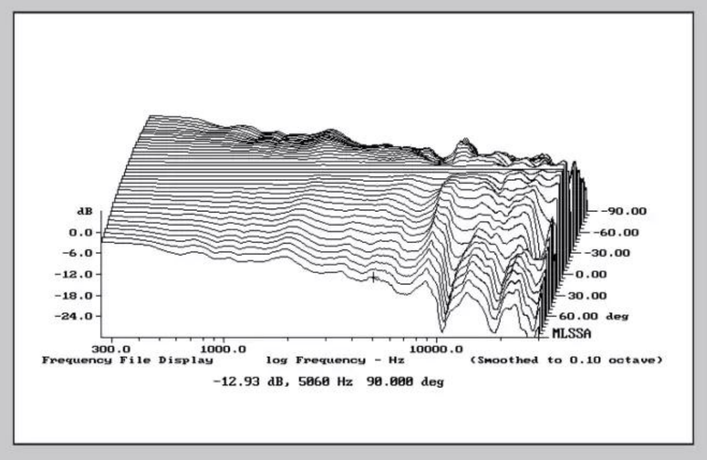


Fig.4 TAD Grand Evolution 1, lateral response family at 50", normalized to response on tweeter axis, from back to front: differences in response 90°–5° off axis, reference response, differences in response 5°–90° off axis.

VITUS AUDIO

AXPONA

2024

Schaumburg Renaissance Hotel and Convention Center

April 12-14, 2024

Schaumburg D Ballroom

vitusaudio.com

IKIGAI AUDIO®
CONNECTING YOUR PASSION

DEALER INQUIRIES INVITED

ANALOG MATTERS
www.analogmatters.com
analogmatters1@gmail.com
800 752 4018

POTENCY
BEAUTY
SOUL

JMF Audio
Overload
Offset
High Temp
dB
+3
0
-3
-6
-9
-12
-15
POWER
Meter
HQS 9001

JMF Audio will be present in two rooms at Axpona Audio Show, April 2024
www.jmf-audio.com North American and UK distributor: Audio Skies info@audioskies.com +1-310-975-7099

nyms and initialisms for their design elements, calls this driver the MACS II (Multi-layered Aramid Composite Shell Second Generation) diaphragm woofer.[3]

The GE1's bass performance is augmented by acoustic tubing directed down to the reflex port that exits to the floor platform. TAD has a term for this as well: AFAST (Acoustic Filter Assisted System Tuning). In technical notes, TAD describes it this way: "Multiple acoustic tubes with acoustic resistance added to their end surfaces are buried inside the enclosure to effectively suppress standing waves." When the audio wave exits the cabinet via the port, it encounters two hefty chunks of diecast aluminum, which TAD terms Bidirectional Aero-Dynamic Port (or ADP). These flared metal blocks, which are mounted on a 15mm-thick aluminum base plate, force the port's output to the front and the rear, blocking it to the sides.

What do these two features accomplish? "It's not a transmission line, but what is happening there is they take the energy inside the cabinet and push it into the port," Malekpour said. "It's almost a funneling system from compression into a horn-loaded port. This filters out some of the potential for noise and gives you a very linear low-frequency exit. The bi-directional movement of energy reduces cabinet motion, and you can also get the speaker closer to a wall than with a rear-firing only port design." TAD's low-end frequency response specification for the GE1 is 27Hz. I note my colleague Ken Micallef's comment when he heard this very pair of GE1's at the 2023 Capital Audiofest. He called it "the deepest, most extended, room-filling and brain-frying low-end I've heard outside a recording studio."

Is this impressive package easy to drive? The published sensitivity is a middling 88dB/2.83V/m, with a nominal impedance of 4 ohms. "They do like power," Malekpour said. "They are not a highly sensitive, superefficient speaker. I like it when the amplifiers have some headroom." In my auditions, I used my VPI analog front end, Bricasti digital, and McIntosh amplification, all familiar from everday listening and several previous reviews.

Rooms of one's own

Both TAD Grand Evolution Ones arrived strapped to a single wooden pallet, packed in two single-layer card-

3 You can think of aramid as generic Kevlar.

measurements, continued

axis, which therefore appears as a straight line, is shown in fig.4. The dispersion is well-controlled up to 6kHz, and above that frequency, the peaks and dips in the on-axis response tend to even out. Both factors correlate with stable, accurate stereo imaging.

With the speaker sitting on its cone-shaped feet, the GE1's tweeter is 39" from the floor, which is a little higher than the average height of seated listeners. (A survey performed by Thomas J. Norton for *Stereophile* in the 1990s found this height to be 36".) The dispersion in the vertical plane, again normalized to the response on the tweeter axis (fig.5), shows that the frequency response is maintained up to 15° above and below the tweeter axis.

In the time domain, the GE1's step response (fig.6) indicates that all the drive units are connected in positive acoustic polarity. The decay of each unit's step blends smoothly with the start of the next driver's step, which implies optimal crossover topology. The GE1's cumulative spectral-decay plot on the tweeter axis (fig.7) features a clean initial decay with a ridge of delayed energy at 9144Hz, indicated by the cursor position in this graph. This is the frequency of a small peak in the speaker's on-axis response, again very similar behavior to that of the TAD CE1TX.

Putting to one side that demanding impedance, the TAD Grand Evolution 1-WN offers excellent measured performance.

—John Atkinson

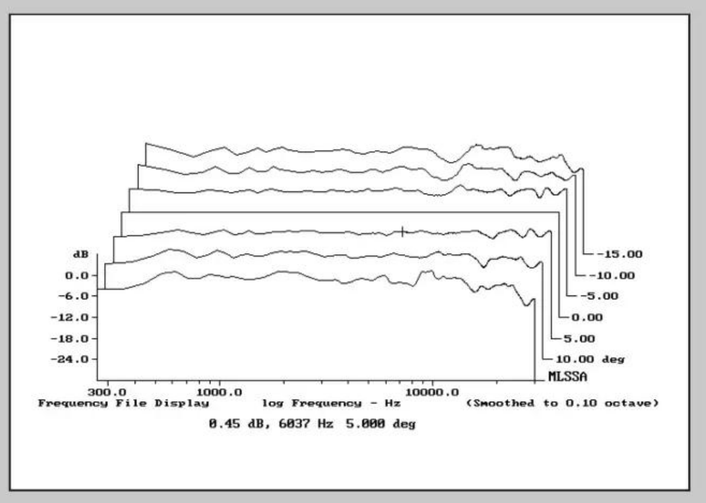


Fig.5 TAD Grand Evolution 1, vertical response family at 50", normalized to response on tweeter axis, from back to front: differences in response 15°–5° above axis, reference response, differences in response 5°–15° below axis.

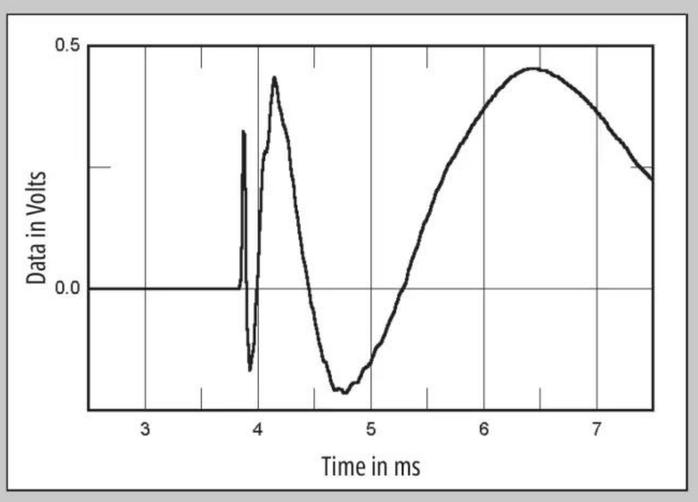


Fig.6 TAD Grand Evolution 1, step response on tweeter axis at 50" (5ms time window, 30kHz bandwidth).

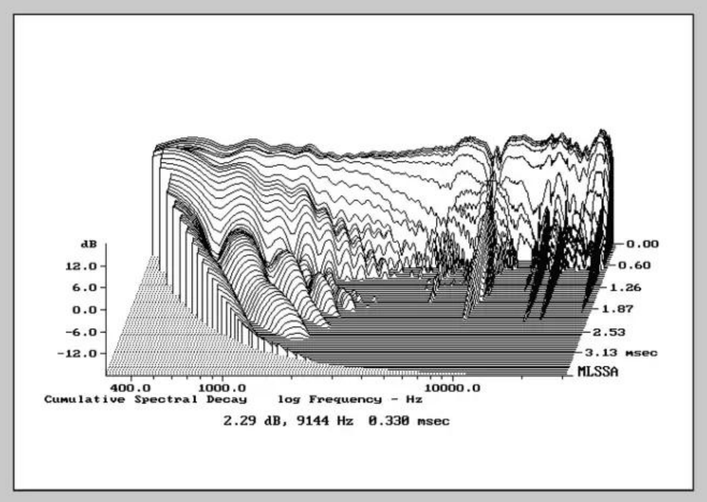


Fig.7 TAD Grand Evolution 1, cumulative spectral-decay plot on tweeter axis at 50" (0.15ms risetime).

board boxes. When I asked about the lightweight packaging, I was told that these boxes were meant for one-time use and that more serious crating was in the works. TAD, apparently, is catching up with increasing demand for their products as their distribution in the US expands after a fallow period.

I trundled the speakers in their boxes into the front hall of our house and unpacked them there before hauling them to the large Victorian double parlor that holds my Downstairs System. I wanted to hear how a substantial three-way floorstander would perform there, replacing the smaller, two-way standmount Harbeths normally placed on either side of a fireplace.

The GE1's base is substantial. It is shipped attached to the cabinets—not designed to be removed by users. When you look at the aluminum base plate, you see four capped corners—but in typical use, only three spiked cones are used, two for the front and one for the center at back. Those requiring greater stability can add two auxiliary feet at the back corners. Also in the parts box are two magnetically attached woofer grilles; oddly, no tweeter/mid grilles are included. I did not use the grilles in my auditioning.

Currently, my Downstairs System includes a McIntosh MA252 Hybrid Drive integrated amplifier with a tubed preamp stage and solid state output. The power output rating is 160W into a 4 ohm load, which is the GE1's nominal impedance. I do not biwire.

Via Qobuz, I pulled up *Respighi: Orchestral Works*, recorded by two different orchestras conducted by John Neschling (24/96 download, BIS Records AB2015). If it doesn't contain everything orchestral by Respighi, it comes close. Along with the chestnuts, I encountered several pieces I did not know including the very interesting single-movement *Ballata delle Gnomidi* from 1919. Why isn't this piece better known? Probably as it was viewed with distaste at the time because of its subject matter: a witch's orgy and a ritual murder of some gnomes. Respighi on acid!

Composed around the same time as the far more successful *Pines of Rome*, "Dance of the Gnomes" shares some musical trademarks: gorgeous, delicate "dawn over Rome" harmonies contrasted with sudden clanging outbursts; lovely, delicate string textures and Coliseum-sized helpings of percussion. The GE1's nailed all this with apparent ease.

This piece is another example of what a great orchestrator Respighi was, one of the godfathers of film music (and I say that as a compliment).

I started to play around a bit with toe-in and found that, as heard from the sweet-spot armchair, a modest amount kicked the soundstaging, timbre, and detail into high gear. I toed them in just enough that I could still see a slice of the cabinets' inner sides, the drivers aimed at a point somewhere behind my head.

These large floorstanders filled the room with music in a way the Harbeths could not. Well off-axis, from a sofa on one side, I still heard a generous stereo image.

In 1987, Shirley Horn recorded a live album, *I Thought About You* (Verve 833-2235-2), at L.A.'s best jazz club at the time, the Vine Street Bar & Grill. The recording is from the same period as her

AXPONA

AUDIO EXPO NORTH AMERICA

Visit us in Schaumburg G
April 12 - 14, 2024

The all new
R 2500 R

Start your journey by scanning the QR code or contact T+A at:
hello@ta-hifi-na.com

Discover the
R 2500 R

T+A
Engineering Emotion

Black

The Black DAC System

Sending the purist signal with exceptional musicality to your amplifier

Visit us at AXPONA 2024 Room 464

bel canto 25 YEARS ADVANCED AUDIO DESIGN

bel canto

www.belcantodesign.com

roon ready · TIDAL · qobuz · vTuner · USB · phono

masterpiece studio album, *Here's to Life*. Horn performs here with her trio, as she mostly did throughout her career. Vine St., as it was known, was a small club, perfectly suited to Horn's intimate delivery. This recording captures that sound. You feel like you're sitting at a small two-top table right next to Shirley and her piano. Shirley's signature tune, "Estate," was gorgeous. The TAD GE1's excelled with vocals and acoustic jazz. The rich lower range of Horn's voice and her breathy delivery all shined. The CST concentric driver is a great vehicle for vocals.

Upstairs

After listening for several weeks to the Grand Evolution Ones in the Downstairs System, I took them Upstairs to my reference setup. I placed them in the spots previously occupied by my Wilson Sasha V's, knowing that most loudspeakers sound best there in my quirky room. It was killer! Performance throughout the bass spectrum was outstanding: deep, detailed, and full, without bloat.

Reaching for a large orchestral palette again, and because I feel the need to listen to him these days, I pulled up Shostakovich, specifically *Cello Concertos Nos. 1 & 2* with Alisa Weilerstein as cellist and the Bavarian Radio Symphony Orchestra conducted by Pablo Heras-Casado (24/96 FLAC, Decca/Qobuz). Amazing "skin" texture from the timpani. The horns in the third movement of No.2 were like a pack of braying wolves on my tail—hair raising! The solo cello felt that way, too, a totally individual sound that could only be a particular person playing a particular instrument. Microdetails were sorted and tangible. To vocals, I would now add massed strings as musical elements the Grand Evolutions excel in re-creating. First-rate.

A favorite recording of mine, which combines jazz and orchestral textures, is João Gilberto's beautiful album *Amoroso* (24/192 FLAC, Rhino-Warner/Qobuz). Recorded in 1977, well after the original Bossa Nova craze, João's delicate vocals and guitar play off Claus Ogerman's outstanding arrangements. João's interpretations of songs by his peer Carlos Jobim are definitive. Gilberto was known for being demanding about the quality of his recordings, going so far as to sue EMI for lousy remastering—and winning![4] I think even João would have loved the sound I was hearing now via the GE1's, the strings sounding smooth as silk, as his vocals did. Portuguese is the language of love; how did all those poor German composers ever write opera?

'Tis the season of Steely Dan and Donald Fagen, bless his cynical little heart. Most audiophiles, if they listen to vinyl, are aware of the recently released Analogue Productions UHQR 45rpm remastering of *Aja*.[5] There are very few titles for which I would shell out the big bucks that Chad Kassem's UHQR series commands, but *Aja* is one of them. Bernie Grundman, who cut the original record, has nailed it to the boards now all these years later. This is one of the finest remasterings I have ever heard.

When I dropped the needle on "Black Cow," my ears turned red from pure pleasure; you should have seen my face. Fagen and Becker went to extraordinary lengths to generate great drum tracks, chewing up drummers in the process. *Pow!* Each drum hit here was laid on me like it was some sort of firearm. Don's unique vocals, delivered with that little lisp he has, were tactile and clear. Emerging from the TAD GE1's, the diction was unique and excellent, each syllable precise, compared to my experience hearing this "*Sgt. Pepper* of the '70s" album over so many years from so many stereos.

I had one more trick up my sleeve. The McIntosh C12000 preamplifier is part of Mac's "Hybrid Drive" series. It is unique in having two pairs of XLR outputs, one solid state, the other tubed. I usually use the latter, as I am running the preamp into the solid state MC462 amplifier and like the hybrid mix. Would *Aja*, which itself is a hybrid of sorts (a blend of jazz with rock and pop), sound better full-bore solid state? Would the GE1 reveal this change?

Yes to both questions! With the solid state preamp circuit, Chuck Rainey's bass added a bit more foundation and pop to its low end. I heard cleaner air around the smokin'-chick background vocals when they explode with their chorus lines. I was riveted—so much so that I couldn't stand up to lift the needle right away. I had to listen to the title track.

"Aja" was the bees' knees; Steve Gadd's drum outbursts in the second half of the tune, along with all the other colors of the percussion rainbow, were like a fireworks display. *Wayne Shorter!* When it ended, with that board fade like most of the other tunes on the album, I wanted it to keep going.

Go ask the goddess

On the wall of my listening room is a small painting I bought in India, of Saraswati, Hindu goddess of knowledge and music, painted in bright colors, playing the Veena (her instrument) with her four hands. Saraswati is painted on top of some sort of black ink invoice, labeled "Court Fee Stamp Jaipur Government" with numbers checked off.

The TAD Grand Evolution One is capable of transcendently beautiful re-creations of recorded music, but in this material world, there's a price to be paid. When I researched it, I was surprised at the number of high-end loudspeaker models currently offered by respected audio manufacturers, at or near to the current retail price of the TAD Grand Evolution One.

It's a crowded marketplace, but the GE1's stand out. There is deep technical knowledge at work here, but you can set aside any concerns about overly analytical performance. The sound is emotion-enhancing and soulful. If you have an opportunity to audition these loudspeakers at a show or a dealer, you really should make the effort. The TAD Grand Evolution Ones are superb, definitive music makers, competitive with the best high-end audio has to offer. Before they trot off to Florida, I'm going to go spin some more sides and light a candle to Saraswati. ■

ASSOCIATED EQUIPMENT

Analog sources VPI HW-40 turntable, VPI 12" Fatboy tonearm, Pro-Ject Classic EVO turntable, Lyra Etna λ Lambda cartridge, Ortofon Bronze Cadenza cartridge, Sumiko Amethyst cartridge.
Digital sources MacBook Air running Tidal, Roon, Qobuz. Bricasti M1 Series II DAC, Musical Fidelity M1 CDT transport, Pro-Ject CD Box RS 2 T.
Preamplification McIntosh C12000.
Power amplifiers McIntosh MC462.
Integrated amplifier McIntosh MA252.
Loudspeakers Harbeth C7ES-3XD, Wilson Audio Specialties Sasha V.
Cables Digital: AudioQuest Diamond AES, Coffee USB; Interconnects: AudioQuest Fire, Sky; Speaker: AudioQuest Firebird, Robin Hood; AC: AudioQuest Dragon.
Accessories AudioQuest Niagara 7000 power conditioner, Mapleshade equipment rack, TonTrager speaker stands, Audiodesksysteme Vinyl Cleaner Pro, VPI Periphery Ring Clamp, IsoAcoustics isolation footers, Gingko Audio Cloud Platforms.—**Sasha Matson**

4 The court eventually awarded Gilberto's heirs 150 million Brazilian real, the equivalent of $30 million.

5 See Revinylization in the February 2024 issue or find it online at stereophile.com/content/revinylization-49-steely-dans-aja.

Audio Advice

The LARGEST online library of home theater, home audio & turntable videos, reviews, buying guides & more!

Shop Online at AudioAdvice.com

Raleigh & Charlotte, NC Showrooms

888-899-8776

Free 2-Day Shipping

30 Day Returns

Expert Advice

Price Guarantee

ROBERT SCHRYER

Octave V 70 Class A

INTEGRATED AMPLIFIER

It may be strange to read what I'm about to say in the pages of *Stereophile*, but it's the cold hard truth so here goes: Audio reviews are inadequate. They don't tell the whole story. They come up short and can even misdirect.

It's not their fault, or at least sometimes it isn't. Even the good ones can't tell you how something will sound to you—let alone make you feel, the ultimate point—in your own room. As helpful as they may be, they can't address the elephant in the listening room: synergy.

Have you ever been to an audio show where a component in a demo sounded wonderful, only for that same model to sound average or worse at the next show, or, God forbid, in your own system? The truth is that most components these days are well-designed and sound good, so why don't all exhibit rooms sound great?

There's no better example of a truism in our hobby than that a well-set-up $10,000 system will sound better than a badly set up $100,000 one. Money can only go so far. Synergy goes further—among components, with the room, the recording, the listener's tastes, the foundation under the equipment, the tubes, and on and on. Even electrical power enters in: Recall another audiophile truism, about how your music often sounds so much better late at night. (The explanation usually given: The power is better late at night.)

In both cases, the reason is synergy. The greater the synergies we achieve in our listening environment—more synergies and more synergistic—the better the music sounds.

In reviewing the Octave Audio V 70 Class A integrated amplifier ($12,000 and up; $15,900 as reviewed), I was reminded of the importance of synergy in our hobby.

SPECIFICATIONS

Description Tube integrated amplifier with class-A output stage with optional MM or MC phono boards. Tube complement: one ECC83 (12AX7), two 12AT7 (ECC81), and a choice of output tubes. Inputs: six single-ended (RCA, including one HT Bypass input and one assignable to the optional phono MM or MC), 1 balanced (XLR). Outputs: 1 pair loudspeaker outputs, 2 single-ended (RCA, including one Preamplifier output and one Record output). Output power: With Power Selector on High 50W setting: 50Wpc into 4 ohms (14dBW); with Power Selector on Low 25W setting: 25Wpc into 4 ohms (11dBW). Frequency response: 20Hz–50kHz @ 50W +1/–3dB. THD: 0.1% at 10W into 4 ohms. S/N ratio: 100dB at 50W (unweighted). Optimal load impedance: 4–16 ohms. Maximum gain: 35dB. Power consumption: 500W at full power, 190W at idle, 20W in ECOmode. Finish: Black or silver.
Dimensions 17.8" (451mm) W × 6.9" (175mm) H × 15.9" (405mm) D. Weight: 51lb (23kg).
Serial number of unit reviewed 22018131 (auditioned), 22018130 (measured). Manufactured in Germany.
Price $12,000; KT120 option adds $400, MC phono board option adds $850, Super Black Box adds $3500. Approximate number of North American dealers: 13 (US: 10, Canada: 3)
Manufacturer
Octave Audio,
Reutaeckerstrasse 5, 76307
Karlsbad, Germany.
Web: octave.de/en.
US distributor:
Dynaudio USA,
500 Lindberg Ln.,
Northbrook, IL 60062.
Tel: (847) 730-3280.
Web: dynaudio.com.

EV 4D

Veyron Collection

Great masterpieces are never created within a comfort zone.

KHARMA

DUTCH MASTERPIECES

Octave Audio

Germany-based Octave Audio's origins date to 1968 when it began as a transformer-winding factory called Hofmann, after founder Karl Heinz Hofmann. In 1975, Hofmann's son Andreas, an audio enthusiast with "electric current in his blood," to quote the company website, introduced hi-fi into the family business by building and selling his own amps, initially under the Hofmann name. Then, in 1980, the company rebadged his wares with the Octave logo. Not until 2000, when Andreas took over the company, was the Hofmann brand changed to Octave Audio. Today, the company builds transformers for OEM companies, though only a few.

Octave Audio released the class-AB, 70Wpc, push-pull V 70 integrated amplifier in 2003. It has been a constant staple of the company's product line and remains so today—only now it has a brother, the 50Wpc V 70 Class A, released officially in May 2020, though the launch stretched into 2022 due to the COVID pandemic. It's the company's third class-A design, after the 8Wpc V16 headphone/integrated amplifier (2017) and the Jubilee 300 B monoblock (2019). As a fan of the sound of class-A, and an enthusiastic owner of a solid state class-A amplifier,[1] I was excited to review the new model.

The Octave didn't so much erase the digital nasties as allow more of the music to emerge so that I cared less about said nasties.

1 Maybe it's worth mentioning here that the particular class-A (integrated) amplifier Rob owns—the Grandinote Shinai—uses solid state devices in a tubelike circuit, output transformers and all.–**Jim Austin**

MEASUREMENTS

I measured a different sample of the Octave Audio V 70 Class A than that auditioned by RS. Mine had the serial number 22018130 and was not fitted with the optional phono module. As RS primarily used the balanced line input and KT120 output tubes with the Power switch set to High and the amplifier connected to the Super Black Box external supply, I performed a full set of measurements in that condition. I then repeated some of the tests with the single-ended inputs, then without the Super Black Box,[1] and finally with KT88 tubes replacing the KT120s and the Power switch set to Low, as advised in the manual.

The four KT120s were not marked, but I followed the guide in their box to install them correctly. (Unlike the KT120s, the KT88s were marked V1–V4.) I let the amplifier warm up for an hour before starting the testing with my Audio Precision SYS2722 system.[2]

The amplifier preserved absolute polarity with all its inputs. The maximum gain into 8 ohms from the single pair of output terminals was 36dB for the unbalanced inputs with both types of output tube, and 6dB lower for the balanced inputs rather than the usual 6dB higher. The balanced input impedance is specified as 25k ohms, which my measurements confirmed. The single-ended input's impedance was the specified 50k ohms at 20Hz and 1kHz, dropping inconsequentially to 39k ohms at the top of the audioband.

The amplifier's output impedance with the KT120s, including 6' of spaced-pair speaker cable, was a high 1.86 ohms in the bass and midrange, rising to 2.14 ohms at 20kHz. (It was 0.4 ohms greater across the audioband with the KT88s.) Consequently, the modulation of the V 70's frequency response due to the Ohm's law interac-

1 I powered down the V70 before disconnecting the Super Black Box, then waited for 60 minutes after powering up the amplifier before repeating the testing.

2 See stereophile.com/content/measurements-maps-precision.

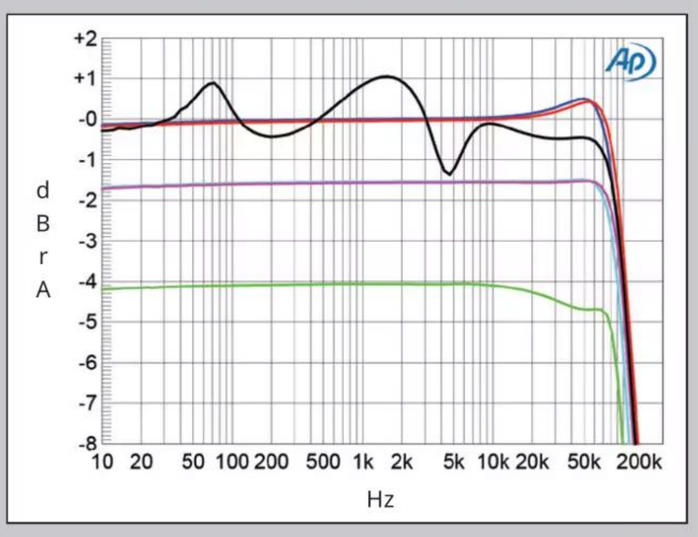


Fig.1 Octave V70, KT120 tubes, frequency response at 2.83V into: simulated loudspeaker load (gray), 8 ohms (left channel blue, right red), 4 ohms (left cyan, right magenta), 2 ohms (green) (1dB/vertical div.).

Fig.2 Octave V70, KT120 tubes, small-signal, 10kHz squarewave into 8 ohms.

“THAT PIANO IS RIGHT THERE”

Extraordinary subwoofer which forms the equipment module pedestal as seen above

Very rapid response and low distortion 20Hz and up. Resonance free.

Adds $490 to system price, including low pass amplifier contained in equipment module.

At the beginning of each musical note there is a brief burst of low frequency startup component which can only be reproduced by a fast woofer like this for that last bit of realism.

VISIT US IN SPECTACULAR VEGAS

GET IN TOUCH

jrsuhre@yahoo.com
www.jimsuhre.com

I was also a little perplexed because this class-A was different—a push-pull design built on a pentode circuit Hofmann developed to surmount what he considers class-A's inherent liabilities: low power, limited dynamic range, and energy-sucking inefficiency. He dubbed this new design Dynamic Bias Control, a souped-up class-A technology with the potential to deliver 50Wpc—and up to 70Wpc when paired with the company's optional Super Black Box Capacitance Power Storage ($3500 each), a power supply–looking device connected to the back of the V 70 that's said to increase the amplifier's capacitance tenfold to improve current delivery and, hence, the ability to drive difficult speaker loads. Octave says it "stabilizes current delivery and reduces the impedance interaction between amplifier and speaker." Better synergy.

I received the Super Black Box as part of the Octave review package. After trying the V 70 with and without it, I decided to do the core of my review with it and, later in the review, report the differences I heard without it. Octave also sells a smaller, less powerful version of the Super Black Box, called the Black Box ($1500), which Octave didn't send me.

Among the V 70's technical features are a 20–30 second "soft start" delay that turns the V 70 on in stages to protect tubes and other critical parts (but especially tubes) from the inrush of high current that can lead to premature wear; an ECOmode that automatically switches on to shut off the amp's tube section after about 7 minutes of detecting no music signal; a home-cinema bypass circuit; a pre-out for connecting to a subwoofer; and an autobias circuit that shows the stages of a tube's lifespan via a multicolored LED layout: yellow for warm-up, green for biased and ready to go, red for kaput.

In the event of a kaput, Octave recommends replacing two tubes—the matched pair it's a part of. An even better (though more expensive) option is to replace all four tubes—both channels. Compatible tube types include the 6550, KT88, KT90, KT100, KT120, and KT150.

Initially, the V 70 was sold with the KT120 tube, but Russia's invasion of Ukraine made that tube harder to get, so it has been replaced by the KT88 as standard. (You can still purchase the V 70 with the KT120 for an extra $400.) I was sent a set of Tung-Sol KT120s[2] and S4A KT88 tubes; S4A tubes are made in China.

John Quick, of Octave importer Dynaudio North America, encouraged me to start my critical listening with the KT120. One JJ ECC83S (12AX7) (ECC83) and two Electro Harmonix 12AT7 (ECC81) input tubes complete the tube array. Thanks to the V 70's "protection circuits and soft-start electronics"—that's from the manual—the power tubes are estimated to last 3–5 years, while input tubes should last 10 years or more. I was intrigued by Octave's assertion, also in the manual, that some tubes can require up to 300 hours of break-in to sound their best.[3]

Like Octave's other top models, the V 70 comes with a power selector—a two-position sliding switch on the back of the unit that offers two power-output settings: High (50W) and Low (25W), the former intended for use with more powerful tube types such as the KT120 or KT150, the lower with tubes that produce less power, such as the 6550, KT88, KT90, and KT100, to avoid overloading them. However, since the KT88 included with the Octave was the Carbon

2 Tung Sol tubes are made by Electro-Harmonix/New Sensor, an American company that produces its tubes in a factory in Saratov, Russia. Its headquarters, and the factory where Electro-Harmonix guitar effects are made, is in Queens, the New York City borough.

3 A couple of years ago, I had a conversation with a designer of tube amps (not related to Octave Audio) in which he asserted that at least in certain designs, tube amplifiers sound much better when they have some hours on them, and in the same conversation that such use causes a degradation in measured performance. Which raises the fascinating notion that in this respect at least, the worse a tube amp measures, the better it sounds.—**Jim Austin**

measurements, continued

tion between this impedance and that of our standard simulated loudspeaker[3] was an audible ±1.1dB (fig.1, gray trace). The amplifier's response into resistive loads was flat in the audioband but rose slightly above 20kHz into 8 ohms (blue and red traces), peaking by 0.5dB at 50kHz before rolling off sharply. Fig.1 was taken with the balanced inputs and with the volume control set to its maximum; the excellent channel matching and the small ultrasonic peak were identical at lower volume control settings and with the unbalanced inputs, as well as with the KT88 tubes. The ultrasonic peak correlated with a small amount of overshoot and one cycle of damped ringing in the V 70's reproduction of a 10kHz squarewave (fig.2).

Channel separation was >60dB below 1kHz but decreased to 37dB at 20kHz, presumably due to capacitive coupling. The wideband, unweighted signal/noise ratio, taken with either the balanced input or the unbalanced input shorted to ground and the volume control set to its maximum, was an excellent 81.3dB in the left channel, 82.3dB in the right channel, both ref. 2.83V, equivalent to 1W into 8 ohms. These ratios improved to 84.7dB left and 87dB right when the measurement bandwidth was restricted to the audioband, and to 92.7dB

3 See stereophile.com/content/real-life-measurements-page-2.

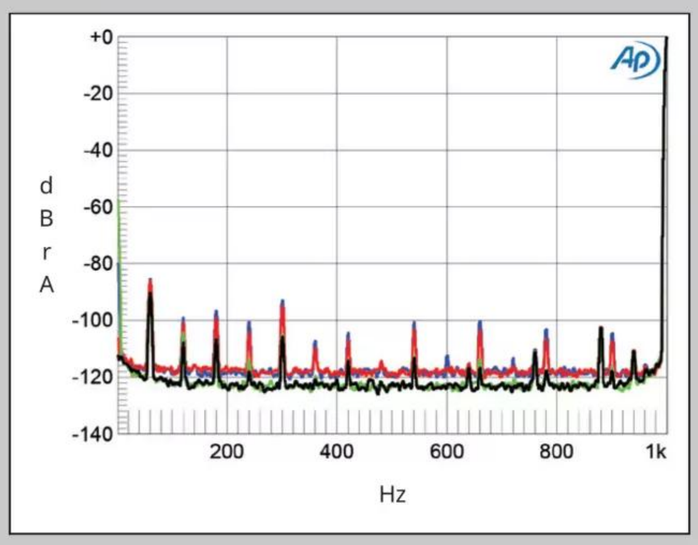


Fig.3 Octave V70, KT120 tubes, Super Black Box, spectrum of 1kHz sinewave, DC–1kHz, at 1Wpc into 8 ohms with volume control set to the maximum (left channel blue, right red), and to –20dB (left green, right gray) (linear frequency scale).

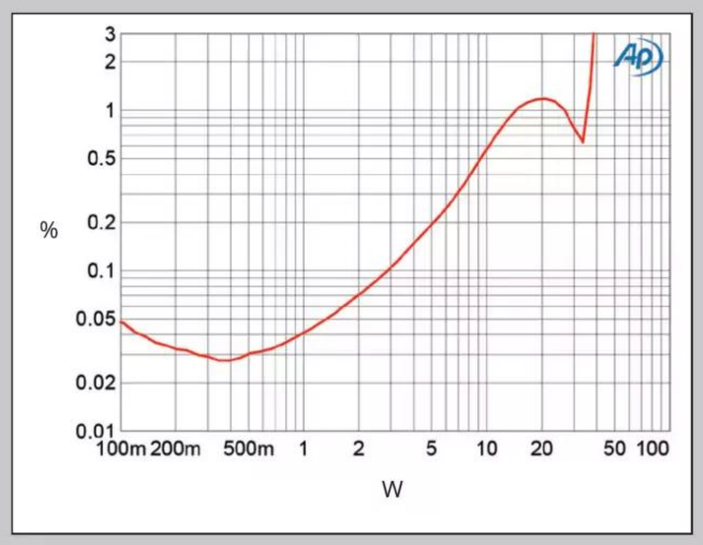


Fig.4 Octave V70, KT120 tubes (High), Super Black Box, distortion (%) vs 1kHz continuous output power into 8 ohms.

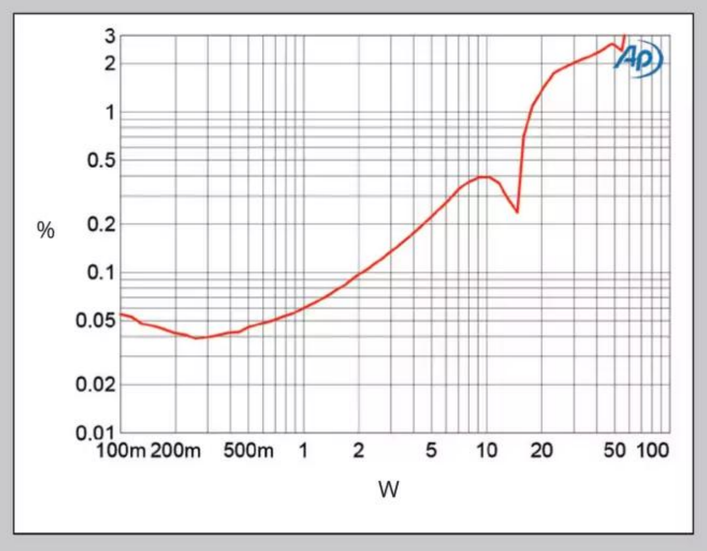


Fig.5 Octave V70, KT120 tubes (High), Super Black Box, distortion (%) vs 1kHz continuous output power into 4 ohms.

Come hear and see us at AXPONA - Rooms 1239 & 1240

TAD

TECHNICAL AUDIO DEVICES LABORATORIES, INC.

"TAD CE 1TX...the finest example of speaker engineering I've ever encountered. Absolutely Class A."
- Herb Reichert, Stereophile

TAD-C1000 Preamp
TAD-D1000 Disc Player
TAD-M1000 2-chl Amplifier

PAD HiFi
DISTRIBUTION
info@PadHiFi.com
(877) 223-8858

KIRMUSSAUDIO

An AXPONA Show Premiere

Since 2017, our ultrasonic record groove restoration system using record ionization has successfully restored record grooves and as such we have been supportive of the discoveries made by J.R. Boisclair of Wally Tools and his techniques to optimize cartridge alignment, both augmenting your analog experience.

THE RETURN OF ALPHASON TO THE US!

BACK IN 1985: The Model HR-100S tonearm received accolades from the Absolute Sound magazine and they recognised it as the world's No.1 Tone Arm. ALPHASON exported the HR-100S to over 20 countries, 25% of which found homes in America. Many were paired with SOTA turntables, creating an exceptional combination. Mike Knowles was the first to pioneer the one-piece arm tube and head shell design, enriched by insights from mathematical vibrational analysis and used from 1981 on the HR-100S.

WELCOME AXPONA 2024: The new HR-200S encapsulates decades of expertise working to push the boundaries of analog playback. Revolutionary improvements, such as Super Finished Ceramic Bearings (2nd in hardness to diamond) that are made in-house, a pioneering Composite Head Shell, our own Advanced OCC Wiring, and our "The Pin Jack" cartridge connectors and meticulous design make it the new benchmark of performance.

It's not just a tonearm, It's a gateway to a musical experience that transcends expectations!

Meet Mike Knowles in person!
Also, bring us a record to restore!
BOOTH 9200

ALPHASON
MADE IN ENGLAND SINCE 1981
In USA: (303) 263-6353
ckirmuss@kirmussaudio.com

KIRMUSSAUDIO AXPONA SPECIAL

$994 (Reg $1,280 w/$118 extra items added at no charge).
WE RESTORE RECORDS, NOT SURFFACE SHINE!

Plate High Bias version, John suggested I try the KT88s in the 50W position on the basis that, as per his email, "the carbon plating allows it to be reliable when fed a higher bias level, thereby producing more power in the V 70 when used in the High 50W setting. We don't recommend using standard KT88 tubes in this setting." I tried the KT88 in both settings and preferred the more open and dynamic presentation I got with High 50W.

The V 70 can be ordered in black or silver brushed aluminum. I received black, and I liked the unit's sober, sturdy appearance. However, unless you count two dots that light up to indicate input and power or speaker-mode selection, the screen has no backlight. In my basement listening room with the lights low, I had to use a flashlight to choose an input, or roll the knob across inputs until I heard music. A backlight would be useful, especially one that could be dimmed or shut off during playback.

On the other hand, the volume control I loved at first grope. In

measurements, continued

in both channels when A-weighted. The S/N ratios were very similar with the KT88 output tubes and without the Super Black Box.

The blue and red traces in fig.3 show the spectrum of the amplifier's low-frequency noisefloor at 1Wpc into 8 ohms with KT120s, the Super Black Box, and the volume control set to its maximum. The level of random noise is low, but even- and odd-order harmonics of the AC supply frequency are present. Reducing the volume by 20dB and increasing the input signal by the same 20dB so that the output power remains at 1W (green and gray traces) reduced the level of the higher-order spuriae by around 10dB and that of the random noise by 5dB. The noisefloor spectra were identical with the KT88s, but removing the Super Black Box introduced low-level sidebands at ±120Hz and ±240Hz around the 1kHz tone.

Octave specifies the maximum power with KT120s and the High power setting as 50Wpc into 4 ohms, 20% lower into 8 ohms. Fig.4 plots how the THD+noise percentage with KT120s and the Super Black Box varies with output power into 8 ohms with both channels driven. The THD+N rises with increasing power above 0.5W, reaching 1%, which is our usual definition of clipping, first at 14.8Wpc (11.7dBW) then again at 36.4Wpc (15.6dBW). The power into 8 ohms at 3% THD+N was 38Wpc (15.8dBW) and was not affected when I disconnected the external supply. Fig.5 repeats the THD+N measurement into 4 ohms. The THD+N reaches 1% at 17.5Wpc (9.4dBW) and 3% at 57Wpc (14.55dBW). The maximum powers were not significantly af-

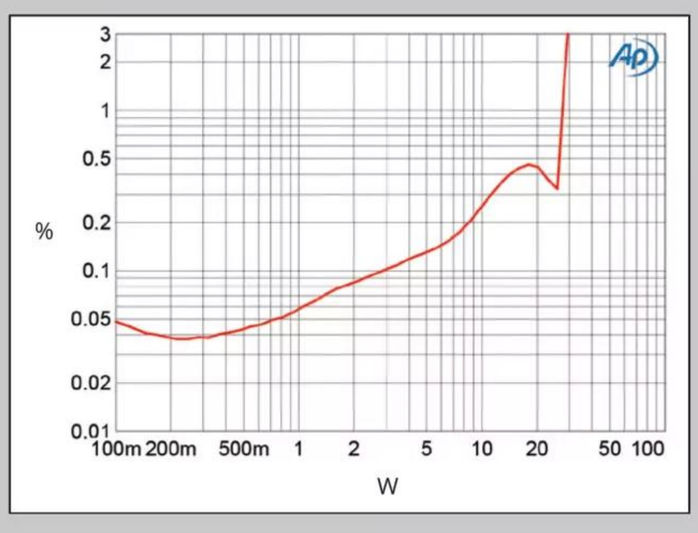


Fig.6 Octave V70, KT88 tubes (Low), Super Black Box, distortion (%) vs 1kHz continuous output power into 8 ohms.

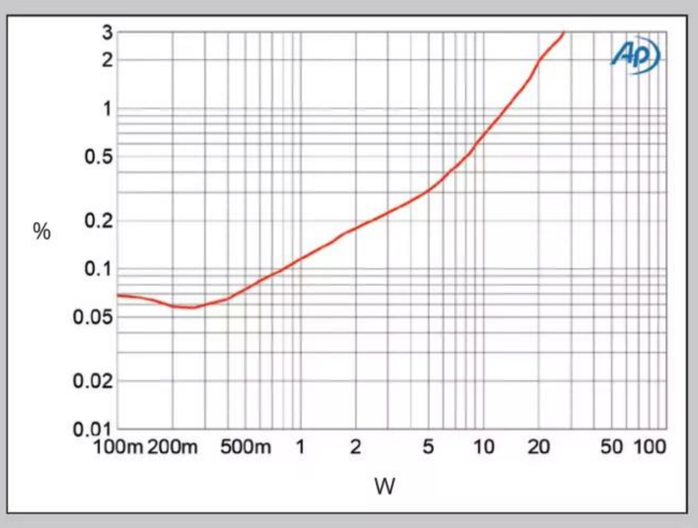


Fig.7 Octave V70, KT88 tubes (Low), Super Black Box, distortion (%) vs 1kHz continuous output power into 4 ohms.

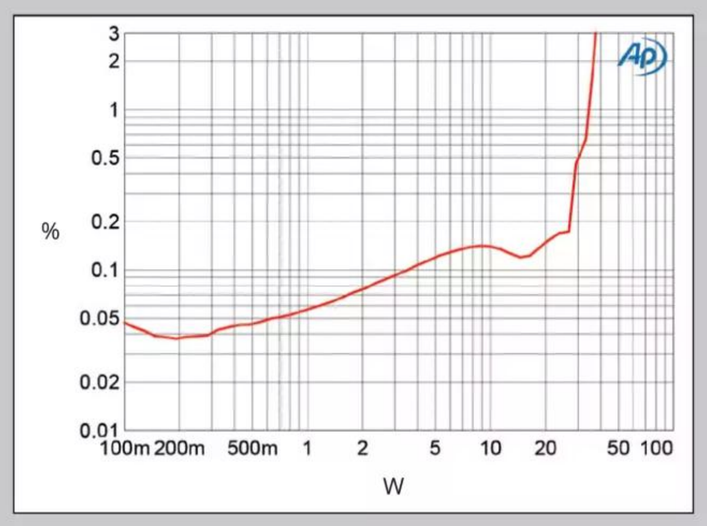


Fig.8 Octave V70, KT88 tubes (High), Super Black Box, distortion (%) vs 1kHz continuous output power into 8 ohms.

NEBO

Starting at $4200/pair

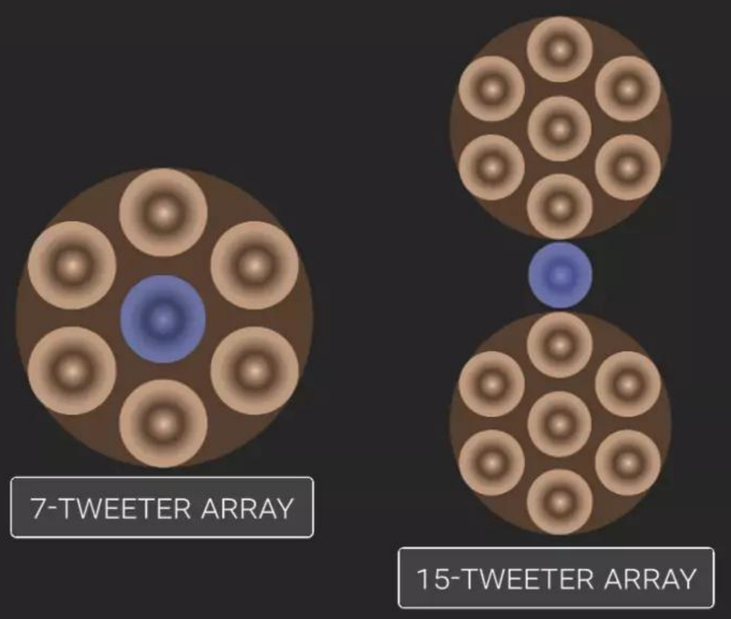
All of our speakers are custom-made by hand at the foot of Mt. Nebo, the highest peak in Utah's Wasatch Range. The Nebo speaker embodies that same power and majesty. Experience the visceral and energetic sound of a live concert right in your listening room.

MOAB BE

Bearing the name of a Utah region that is home to some of the world's most beautiful natural rock formations, the Moab BE is the newest iteration of our best-selling Moab featuring an all-beryllium array of tweeters that will make your music more dynamic, visceral, and engaging than ever before.

PATENTLY DIFFERENT

When audiophiles use the term "perfect midrange" to describe a listening experience, you know you're onto something special. Our speakers feature a patented transducer array that reduces the moving mass of drivers to reproduce midrange to exacting accuracy. And the results are extraordinary.



DESIGN TEKTON

VISIT OUR WEBSITE

my hand it felt like a perfectly weighted, polished mini-menhir. Using it was tactile and intimately physical. This is not a multifunction remote. It has only two buttons, to lower or raise the volume—but what buttons! A soft-rubber mat-like texture, spring-action responsiveness, thumb-cupping comfort—my thumbs never felt so coddled. I wanted to change the volume just to feel it again.

The V 70 comes with a tube cage, but John suggested I remove it during listening because, "even though it's ventilated, a certain amount of acoustic energy can build up inside that little chassis. The cage is there really for safety and import reasons." Besides, the tubed V 70 looks prettier with the top down.

Like every other Octave product, the V 70 class-A is designed and built entirely in Germany.

Listening

With the V 70 fitted with the KT120 tubes, I started my listening with an acid test in which both I and the system are tested: the Cannonball Adderley Quintet's mediocre-sounding CD, *Mercy, Mercy, Mercy* (CD, Capitol Jazz CDP 7243 8 29915 2 6), an early digital release whose good music I can enjoy only in merciful bites. The Octave made the CD sound relatively good. It took this swinging live set and the noisiest crowd I've heard on disc and made it sound fun.

Before you think, "Oh, the Octave was hiding the nasties with layers of syrupy distortion," it wasn't, or at least, that's not what I heard. I heard the opposite: an opening up, a growth spurt of harmonic foliage coupled with deep-view transparency. The picture was naturally detailed, with radiant tone and images that were more fleshed out than usual. The Octave didn't so much erase the digital nasties as allow more of the music to emerge so that I cared less about said nasties. The Octave perked up this recording, making it sound almost like a remaster of its former self. An amplifier-

measurements, continued

fected when I repeated these tests without the Super Black Box.

With KT88 tubes and the Power switch set to Low, the V 70's maximum power is specified as 25W into 4 ohms. In this condition, the V 70 clipped at 27Wpc into 8 ohms (14.3dBW, fig.6) and 13.5Wpc into 4 ohms (8.3dBW, fig.7). Relaxing the clipping definition to 3% THD+N, the 4 ohm clipping power was 28Wpc (11.46dBW). Out of curiosity I examined how the 8 ohm THD+N with KT88s varied with power with the Power switch set to High. The result is shown in fig.8. The V 70 now clips at 34Wpc into 8 ohms (15.3dBW), and the THD+N is generally lower than with the Low switch setting. It was still high into 4 ohms, however (not shown).

Fig.9 shows how the THD+N percentage with KT120s changed with frequency at 6.33V, which is equivalent to 5W into 8 ohms and 10W into 4 ohms. The distortion into 8 ohms (blue and red traces) is around 0.2% over most of the audioband, with small increases below 50Hz and above 4kHz. The THD+N percentage almost doubles into 4 ohms (green and gray traces). Fig.10 repeats this test with the KT88 tubes and Low Power. The THD+N in the right channel (red trace) is very much lower than it was with KT120s, and though it is higher in the left channel (blue trace), it is still lower than with KT120s. However, as expected from the shape of the trace in fig.7, the THD+N rises precipitously into 4 ohms (green and gray traces).

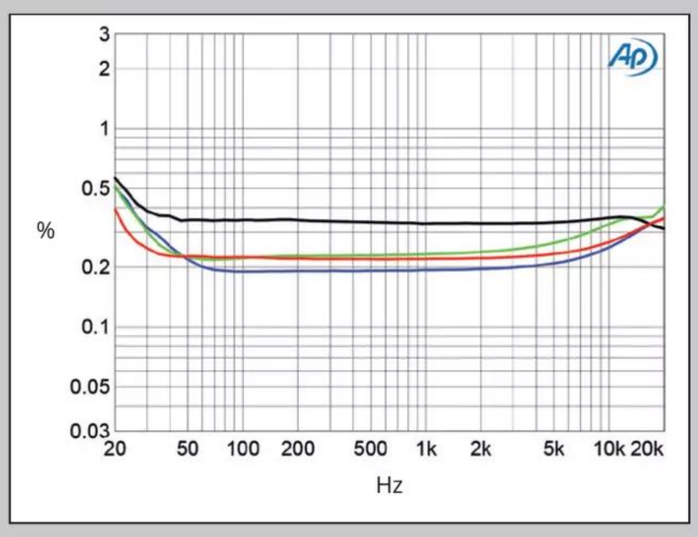


Fig.9 Octave V70, KT120 tubes, Super Black Box, THD+N (%) vs frequency at 6.33V into: 8 ohms (left channel blue, right red), 4 ohms (left green, right gray).

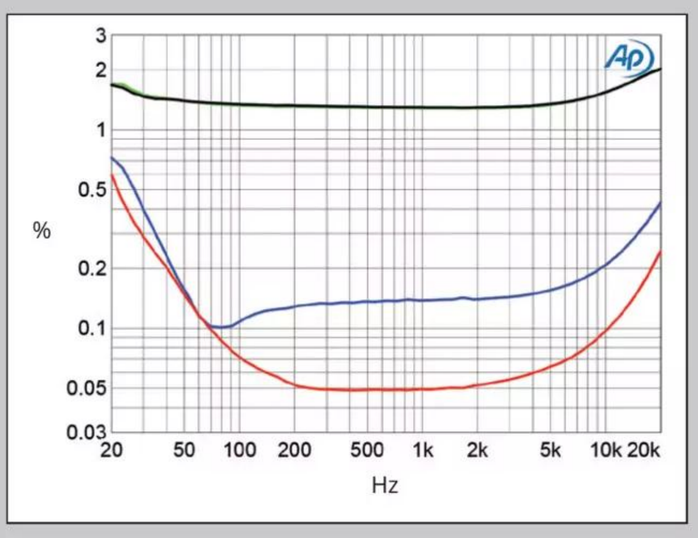


Fig.10 Octave V70, KT88 tubes, Super Black Box, THD+N (%) vs frequency at 6.33V into: 8 ohms (left channel blue, right red), 4 ohms (left green, right gray).

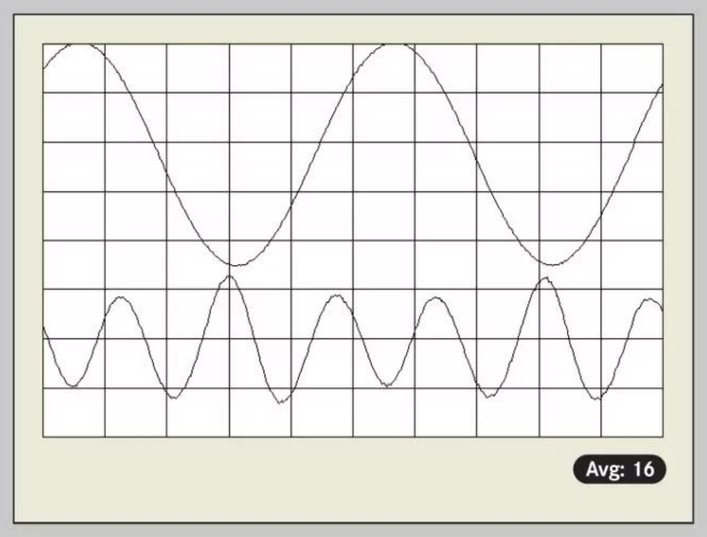


Fig.11 Octave V70, KT120 tubes, 1kHz waveform at 5W into 8 ohms, 0.19% THD+N (top); distortion and noise waveform with fundamental notched out (bottom, not to scale).

SVS SOUND REVOLUTION

Ultra Evolution Speakers

The Culmination of Sonic Obsession.

Groundbreaking audio engineering, revolutionary performance that transcends their class.

"***Accurate and immersive.*** *A mature product from a company that is elevating its game to compete with the high-end offerings of the two-channel world."*

-Stereophile

"What really took me aback was how ***neutral the midrange sounded and how refined the highs were.*** *Bass was impressively deep, controlled and tight.* ***A superbly voiced loudspeaker.***"

-Soundstage

SVSound.com

induced remaster.

The Octave time-stamped the performance on *Mercy, Mercy, Mercy*—the musicianship, the venue, the giddy crowd banter—by restoring sonic cues. The crowd sounded distinct, giving real personality to the whoops, oohs, yeahs, yelps, the guys-bonding-together exclamations: "What do you think of California now?" It put dimensional measurements to things in space. It made instruments sound physical, impactful, polished, and dynamic, and it placed me on the threshold of the action, maybe 8' from the stage, where my perspective was of hearing band members playing side by side. The Octave radiated the performance, making it big, robust, lustrous, alive, and emotionally galvanizing. I felt like calling the waitress and ordering a beer. Instead, I grabbed one from my minifridge.

When Adderley introduced the title song—"You know, sometimes we're not prepared for adversity"—the lilt in his voice was expressive. His breath against the mike was at once plush and natural-sounding, with real-breath substance. It had shape and denoted it, too: I could picture Adderley's girth and height just by his voice (though who knows if my inner vision was accurate?).

Similarly, the notes emanating from Adderley's alto sax and Victor Gaskin's double bass had meat and tonal shadings. The round, springy note effect in Joe Zawinul's piano sounded timbrally pure, sweet, and delicate, despite the ruckus going on around it. Trumpets were brash and searing, exciting and dynamic. Even the drums, probably the tinniest-sounding instrument on this tinny-sounding disc, had body and were clearly part of a drum set. I could hear the lopsided-oval fluctuations in the movement of the cymbal plates.

We audio enthusiasts like to talk about how a system is akin to a time machine, but is there any type of recording that embodies

measurements, continued

The THD+N waveform at 5W into 8 ohms with KT120s was primarily the third harmonic (fig.11), though the second harmonic is also present at a slightly lower level (fig.12).[4] This graph was taken with the Super Black Box connected. Without it (fig.13), the supply-related sidebands I noted in fig.3 were 20dB higher in level than in fig.12, though still low in absolute terms. The distortion spectrum with KT88s (not shown) indicated that the increased distortion in the left channel was due to the second harmonic being dominant, which suggests that the output tubes in this channel were not well-matched. Intermodulation distortion with KT120s and an equal mix of 19kHz and 20kHz tones was relatively low (fig.14), with the second-order difference product at 1kHz lying at –67dB ref. a peak level of 5W into 8 ohms. The higher-order products at 18kHz and 21kHz lay at –60dB (0.1%).

The Octave Audio V 70's measured performance is typical of a tubed amplifier that doesn't use a large amount of corrective loop negative feedback. The lowest distortion at moderate powers is obtained with the KT88 output tubes driving 8 ohms with the Power switch set to High, but I don't recommend this condition for loads below 8 ohms. The KT120 tubes cope better with lower impedances.—**John Atkinson**

4 The signal-related class-A bias topology means that while higher-order harmonics can be seen in this graph, they are 25dB lower in level than the lower-order harmonics.

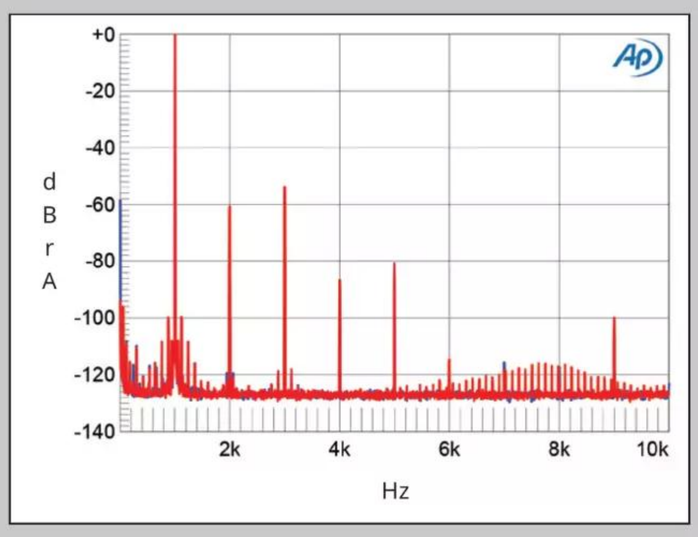


Fig.12 Octave V70, KT120 tubes, Super Black Box, spectrum of 1kHz sinewave, DC–10kHz, at 5Wpc into 8 ohms (left channel blue, right red, linear frequency scale).

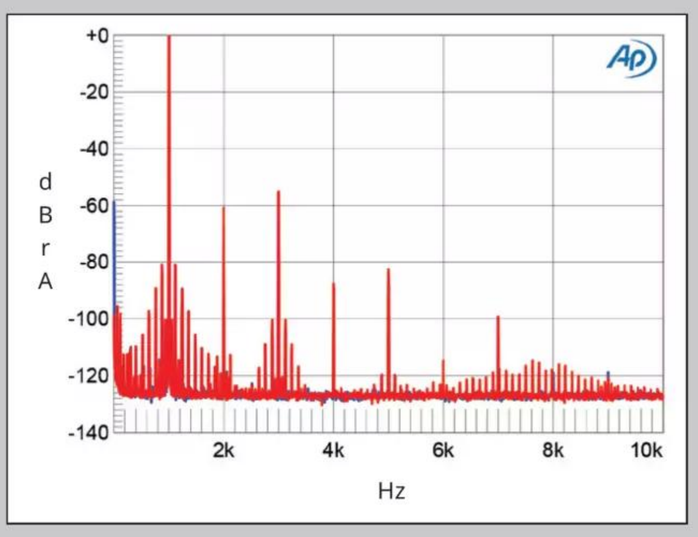


Fig.13 Octave V70, KT120 tubes, internal supply, spectrum of 1kHz sinewave, DC–10kHz, at 5Wpc into 8 ohms (left channel blue, right red, linear frequency scale).

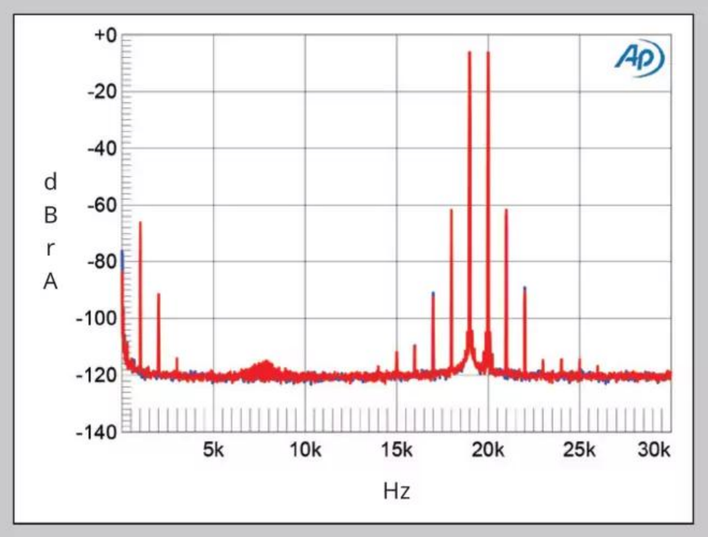


Fig.14 Octave V70, KT120 tubes, HF intermodulation spectrum, DC–30kHz, 19+20kHz at 5Wpc peak into 8 ohms (left channel blue, right red, linear frequency scale).

SINCE 1997

ESPRIT

www.esprit-audio.fr

Meilleur achat HAUTE FIDELITE

HAUTE FIDELITE référence

2022 the absolute sound EDITORS' CHOICE AWARDS

2023 the absolute sound EDITORS' CHOICE AWARDS

EDITORS Choice 2022 MONO&STEREO

VUMETRE REMARQUABLE

hi-fi+ EDITOR'S CHOICE 2020

hi-fi+ HIGHLY COMMENDED 2021

DIAPASON HI-FI D'OR

HiFi PiG MAGAZINE

HIGHLY Hifi Pig RECOMMENDED

that better than live jazz? The Octave answered that question for me. It showed me that *Mercy, Mercy, Mercy*, despite its sonic limitations, was indeed a time machine.

The Octave passed the acid test, as did I. I listened to three tracks straight through.

Next up: *Desert Lady / Fantasy* (CD, Columbia CK 57856) by Toshiko Akiyoshi and her 16-piece Jazz Orchestra, featuring Lew Tabackin. I played three minutes of the first track, then three of the next, the title track. The soundstage was grand: flush with detail, big pictures, and colorful images, except this time, during some parts, its pacing and images seemed to drift more than usual, none of which I had noticed on the Adderley CD, which is a much more sterile-sounding recording than this more harmonically tufted Akiyoshi one.

I cranked the volume to feel the full effect of this ambient, textured, special-effects–laden Krautrock classic lap over me.

I substituted my iFi DSD Diablo DAC, whose character is a little tighter, drier, and more forceful than that of the Cambridge Audio DAC. That did it. It increased force and gravity, sped things up,[4] and, as a side bonus, made the presentation more transparent and detailed. This got me wondering if something in the Octave's own character might have made it and the Cambridge DAC a less-than-ideal match. I'm going to go with maybe, considering the Octave-iFi combination sounded fast, dynamic, and substantial. Pluses and minuses.

The V 70's soundstage sounded airy but also densely populated. It drew a circus tent that englobed my listening space and gave me a fifth-row perspective from the stands that required me to occasionally crane my neck upward to catch the acrobatics vying for my attention: "Hey, look what I can do!"

When I replayed "Desert Lady / Fantasy," a three-movement ride across the desert that opens with a muted, slinking brass line, rolls of ominous conga drums, tight cymbal smacks, and a snaking flute solo complete with throat warble, images were well separated and protuberant, each vividly painted in its own complex color scheme.

At one point, I was startled by the appearance of a tambourine shaking like the tail of an angry rattlesnake 8' behind what sounded like a bass trombone; timbres sounded authentic and tonally delineated. At another point, I was surprised by how many tonal shades of muffledness I could hear mutating from a muted trumpet. I wasn't sure I'd ever before heard this music sound so transiently and microdynamically packed. Even the sustains that reached deep into my room sounded densely pigmented.

Akiyoshi's piano notes gleamed like gems; cymbal hits wavered in undulating waves; double-bass notes bounded like an excited, healthy heartbeat; brass instruments were startingly dynamic. But the Octave's most striking qualities—its defining ones—were the feeling of transparency, detail retrieval, vivid shapes, and the way it imbued sounds with a stage-like presence. The Octave sounded almost flamboyant—bold, with bold images—but well-balanced, with good extension at both frequency extremes. The lows and highs weren't just good for a tube amp; they were very good, period. The high notes of trumpets and flute seemed to ramp up as high as they should, while lows rumbled, pummeled, and vibrated against my chest. In the middle of those extremes lay a lesson in musical anatomy, one that made me question if I'd been, all this time, using the term "explicit" too liberally, because:

Before the end of the first movement, when a pressing succession of instruments enters the picture and the tempo shifts into high gear, the sound was full, fast, and exhilarating. There was a dramatic sweep to the proceedings, a dynamically charged culmination that kept me on the edge of my seat. The Octave drew the scene and laid it out, with big-screen visuals and movie-soundtrack momentum.

The Octave sounded cinematic, bigger than life but within natural parameters. It played mind tricks, like when I thought its tonal balance might be overly lush or rich but on closer inspection it was merely colorfully dense. Was the V 70 tube warm? More like semisweet, with harmonics more instrument-related than bass-related. How else could the amp sound so transparent and reveal so much detail? It straddled the lines between tube efflorescence and solid state vigor, between low-powered intimacy and high-powered impact, between charisma and authenticity.

After the frenzied finale of the first movement, the ambient silence that opens the second came out unusually thick and bulging. That's when I got it. The ambient silence represents the oppressive desert heat, a creative flourish that the Octave revealed. When things in the track picked up again amid a far-off stream of indigenous war cries, the conga drums that propel the momentum sounded so translucent (yet harmonically threaded together) that it felt as if the real, live thing might be breaking through. Brass instruments were here already, piercing the air and the membrane between their space and mine with a tonal shine and dynamic élan that sounded right here.

The Octave heightened the mind-expanding effects of Can's *Future Days* (CD, Spoon Records 9385-2 724596938522)[5], as much psychedelically as creatively. The art stood out—the elaborateness of the music's construction, with its multiplicity of sound effects coexisting with a core of more conventional sounds: a slow-beating bass pulse, djembe hand drum slaps, twangy guitar pickings, muffled singing. That girl with the foreign—presumably German—accent? I'd never heard her lyrics so intelligibly rendered, erasing all prior doubts I had about what she was saying. This clear, sensical view on things changed my mind: Those studio effects weren't as improvised as I'd thought; like a well-crafted picture collage that may at first glance seem haphazardly composed, *Future Days* sounded like a carefully crafted piece whose whole was greater than the sum of its parts.

4 That is, it made the music pacier.

5 Can vocalist Damo Suzuki passed away on February 9. *Future Days* was the last Can album Suzuki appeared on. RIP.

AXIOS
FENIX

INTRODUCING OUR FLAGSHIP IEM CABLE

available in all copper, hybrid(copper & silver), & all silver

come see us in room 1118 and booth 8123

AXPONA
AUDIO EXPO NORTH AMERICA

KIMBER KABLE®

www.kimber.com - 801-621-5530

I cranked the volume to feel the full effect of this ambient, textured, special-effects–laden Krautrock classic lap over me. The Octave produced a panoramic view of deep abstractions and reach-out-and-touch pictures that traveled in elaborate patterns leading into one another. Both color and detail were abundant, swamping my room. Even though I was listening to this track louder than normal, I experienced no listener fatigue, no desire to lower the volume (neither to relieve the sonic pressure nor so that I could feel the handset's cushy buttons again).

Just as I'd never heard *Desert Lady / Fantasy* sound as cinematic as it did through the V 70, I'd never heard *Future Days* sound this much like a performance piece or theatrical art installation.

The V 70 arrived fitted with the company's MC phono board—an MM one is also available—to go with the MusiKraft Denon DL-103 cartridge on my Rega P5. The board is installed by the dealer and has no user-adjustable settings. The loading values are fixed for both MC and MM cartridges. In my case, that meant an input impedance of 150 ohms, input sensitivity of 0.5 mV, and the subsonic filter set at –12dB/octave. If you're a habitual cartridge swapper, a better solution might be to purchase Octave's external phono stage, the Phono EQ.2 MM/MC, at a cost $1100 higher than the $850 internal phono option. The EQ.2 features multiple loading options and is switchable between MM and MC.

I started my vinyl listening with Bell Orchestre's *House Music* (LP, Erased Tapes Records ERATP141LP-CA), a rock-classical hybrid instrumental work that includes several string instruments, group chanting, and a menagerie of seamlessly integrated studio sound effects. Via the Octave's phono stage, the band sounded bigger than six members—more vaulted and sonically varied with a richer, more reverberant consistency. The V 70's characteristic transparency, big-picture boldness, and the detail retrieval I'd heard with digital came through, if not quite to the same level. (That limitation could be a reflection more of the sources I was using than of the phono itself.)

Texture and transient tactility were conspicuous. On the first track, "Opening," violin and double bass produced vibrant, rich-brown tone and vibrational texture that seemed serrated. The drums were focused, dynamically spry, and, judging by the arc of the drum hits, compact. The group chanting was almost *Star Trek*–y, with its extended-vowel, dashing-through–outer-space aura, vocally layered and luxuriantly toned. The phono stage emphasized the music's coherency, both in the sense of a band playing together in the same room and in their creative complicity, the feeding-off-each-other group dynamic.

I felt a this-is-live tingling at the back of my neck when I put on the first disc of the Doors' double LP, *Absolutely Live* (LP, Elektra, EKS-9002), even before the music started.

"Even to the crowd noise," I thought. The Octave and its phono stage brought drama and a narrative arc, from the stadium atmosphere brimming with echo and hotspots of restless audience activity through the emcee pleading with people to return to their seats or the show won't go on, to when the Doors are finally called onstage, when the ensuing crowd eruption was an 8' wall of screams that sounded as interlocked and glisteningly distinct as the scales on a snake. The phono stage delivered that mounting excitement in three acts.

When the instruments enter in sequence to play Bo Diddley's hit "Who Do You Love," they're well-focused and jut out colorfully from the background. John Densmore's somersaulting opening drum solo exhibited a good mix of punch and texture. Ray Manzarek's Rhodes piano, played with his left hand, set down a thick, room-buzzing bass groove, while the organ, played with his right, punctured the air with color-stratified chords. Robby Krieger's angular electric guitar chords had a similarly tinted complexion, while Jim Morrison's words were clearly articulated and elliptically formed, with no sibilance. When the band leaped into the track's rock'n'roll chorus, the music had impact, power, and rhythmic fortitude.

About that Super Black Box: Using the V 70 without it resulted in a general reduction in tonal color, soundstage size, instrumental separation, and sense of musical ease. On the other hand, with material with minimal instrumentation, such as just Nina Simone singing and playing her piano or Patricia Barber singing and playing hers, I couldn't be sure I heard any benefit in using the Super Black Box. For everything else, the V 70's fundamental character and qualities mentioned in my review were still there without the Super Black Box, just less so.

Finally came the moment to AB-test swap the KT120 and KT88 output tubes, and it's at this juncture that the concept of synergy became a theme for this review, because while I expected my tube comparisons to result in a universal winner, that's not what happened. The KT88's generally denser tone, more cut-out imaging, and more realistic timbre suited some recordings particularly well, while with other recordings I preferred the KT120's more panoramic, harmonically developed, bassier, more dramatic presentation. In the end, I chose the KT120s over the KT88s, in part because they sounded a smidge more refined and less grainy than the KT88. That could be because, though I burned them in for 50 or so hours, it might not have been enough.

The wrap

I found the Octave V 70 to be a slightly tweaky component (in view of its several options) that presented music on a grand scale, with vivid colors and shapes and a dynamic momentum that was emotionally engaging. It did a few things that don't often coexist in a single product as well as they did in this one: color, texture, transparency, tonal density, sense of touch, bass heft, and dynamic power. Does that sound like your typical tube amp?

I would say that Andreas achieved what he set out to do: create an amplifier with the soul of a class-A combined with the muscle of high-powered AB. The result is a product like nothing I've heard before, which sounded bigger than life and natural simultaneously. The Octave V 70 had the spirit of cinema vérité in Technicolor. All things considered, I think the $15,900 asking price for the V 70 with the KT120 tubes and the Super Black Box is a pretty good deal.

I'll leave the final sonic impression of the Octave V 70, in the configuration I just described, to my good friend Karim, in whose ears I trust. Having heard it in my system, he declared, "Rob, your system never sounded this good." That's synergy. ■

ASSOCIATED EQUIPMENT

Analog source Rega P5 turntable with RB700 tonearm and Audio MusiKraft Denon DL-103 cartridge, Luna Cables Orange Step-up transformer.
Digital sources Simaudio Moon 260D CD transport, iFi iDSD Diablo DAC. Cambridge Audio EVO 150 (used as DAC)
Loudspeakers Focal Aria K2 936.
Cables Digital: AudioQuest Carbon (RCA S/PDIF), DH Labs Silver Sonic D-750 (RCA S/PDIF / 3.5mm S/PDIF). Interconnect: Audience Studio ONE (RCA). Speaker: Kimber Kable Monocle-XL (w/banana plugs). Power: Shunyata Research Black Mamba CX, LessLoss DFPC.
Accessories Shunyata Research Venom PS8 power conditioner; a component rack and a wood plinth stand (under turntable) whose brand names are lost to time.—**Rob Schryer**

estelon

Meet the new AURA

www.estelon.com

TOM FINE

Cambridge Audio MXN10

STREAMER–D/A PROCESSOR

The MXN10 is a thoughtfully considered, high-performance bridge to the future-present, at a price that's friendly to most budgets.

For music listening *circa* 2024, streaming is both the present and the future. Physical formats are still around, and they are still the best choice in some cases, as with deluxe reissues of beloved albums, which may add value with extra live performances, full-resolution surround sound, and other perks. The niche vinyl market continues to thrive, and that business model obviously works for releases of a few thousand copies. (It also works, apparently, for releases of hundreds of thousands of T-Swift platters to be displayed on shelves and hung on walls.)

But facts is facts: Streaming is now the *only* mass medium for listening to recorded music—the primary carrier for music—and has been for a few years now. According to RIAA statistics, the crossover year was 2016. That's when, in revenue terms, streaming outpaced physical formats. By 2022, the latest full year tabulated, streaming accounted for 84% of US recorded-music revenue.[1]

So what's a long-time audiophile, born into the analog world, with strong roots in physical media, supposed to do? We can cling stubbornly to our shelves of LPs and CDs—as I do. We can rage against lossy streaming such as that provided by market leader Spotify. (I do that, too.) We can pay $30+ for a vinyl copy of the newest hit album, most likely recorded digitally and then cut to a format rife with audible sound-quality compromises. (I don't do that.)

Or we can embrace the present and future, integrate high-quality streaming and digital files into our audio life, and benefit from the easy, low-cost musical exploration streaming offers. Streaming and physical media coexist beautifully and often enhance each other, aided by current hi-fi hardware.

1 See riaa.com/u-s-sales-database. Note that even though streaming revenue has been a shot in the arm for the record biz, revenues adjusted for inflation are nowhere near the peak reached in the Compact Disc heyday.

SPECIFICATIONS

Description Inputs: Ethernet, USB-A (mass storage), Wi-Fi, Bluetooth. Outputs: Line Out (Unbalanced), Digital Out (S/PDIF on RCA, TosLink). DAC: ESS Sabre ES9033Q. Frequency response: 20Hz–70kHz +0/–1dB. Ethernet connectivity: IEEE 802.3 10 Base-T or 100 Base-T. Wi-Fi connectivity: Wi-Fi 5 Dual Band 2.4/5GHz. Bluetooth Connectivity: 5.0 A2DP/AVRCP supporting SBC and AAC. Supports UPnP, USB Media, internet radio, Apple AirPlay 2, Chromecast, Spotify Connect, Tidal, Qobuz, Roon Ready. Supported audio formats: ALAC, WAV, FLAC, AIFF, WMA, MP3, AAC, HE AAC, AAC+, OGG Vorbis up to 32/768kHz PCM, DSD512. Max power consumption: 20W. Standby: <0.5W. Included accessories: Wi-Fi and Bluetooth antennas, regional mains lead.

Dimensions 8.5" (215mm) W × 2" (52mm) H × 7.5" (191mm) D. Weight: 2.65lb (1.2kg).

Finish black powdercoat with silver or black aluminum faceplate.

Serial number of unit reviewed MC C11299 7358 0166. Designed and engineered in Great Britain, assembled in China.

Price $499. Approximate number of US dealers: 75.

Warranty: 2 years, with an extra year awarded with online registration.

Manufacturer
Cambridge Audio,
Gallery Ct., Hankey Pl., London, SE1 4BB, United Kingdom.
US agent:
Cambridge Audio USA,
1913 N. Milwaukee Ave.,
Chicago, IL 60647.
Tel: (877) 357-8204.
Web: cambridgeaudio.com.

For the benefit of those who haven't done it already, here's the argument for jumping into streaming, in a nutshell: For the cost of a couple of cups of coffee a month—less than the cost of a single LP or CD—you can easily find and quickly play a goodly portion of all the recorded music that has been digitized, at home or on the go.[2] You can get at least CD quality and often HD from Qobuz, Tidal, Amazon, or Apple Music. Search for any song that pops into your head, or that you read about, or that a friend recommends, and more likely than not, after a few finger-punches on your phone, it's playing for you.

Remember the bad old days when FM-radio tastemakers (the music "influencers" of the day) decided what new music you could hear? Remember going to a store to buy an expensive LP or CD selected largely on faith? (What FM station regularly played whole albums? Mostly we heard a handful of hits.) Good riddance, bad old days.

In the modern world, streaming is both the cheapest way to hear most recorded music and, if you are mulling buying a physical copy, it's cheap try-before-you-buy insurance.

The downside, and it's real, is that we're only *renting* the vast history of recorded music, month-to-month. There's a chance our favorite streaming service could go out of business—and then what have we got? Just the files we've bought (if we're lucky) and physical media we've collected.

A young adult reading this magazine (such a rare creature, alas, so welcome, friend) might chuckle and say, "Hey old man, WTF? Physical formats have been zombies for decades. Don't you remember Napster, the iPod, ripping your CDs into iTunes? You still keep those shiny 5" relics around? Yeah, I dig the vinyls, but most music I hear streams out of my phone. Get with the program, gramps!"

Fellow analog-born audiophile, allow me to introduce a low-cost/low-risk way to get with said program, even if you're a die-hard CD hater and presently have a system that includes no digital components.[3]

A bridge to the future present

The Cambridge Audio MXN10 is a compact, self-contained gateway into the world of ephemeral music media, not only streaming from the online services but also music files stored locally on your network, hard drives, and thumb drives plus the fascinating world of internet radio. The MXN10 has a streaming (Ethernet and Wi-Fi) input and a high-quality D/A converter with unbalanced RCA analog outputs. Give it a music-data source and plug it in to any

2 Estimates vary as to how much of the music ever recorded ever made it to CDs or streaming services. Google it to join the fray, but prepare for a trip down a rabbit hole. As a person with relatively wide tastes and interests, I'd estimate that perhaps 80% of what catches my fancy is easily findable on Qobuz or Spotify.

3 Hopefully, even die-hard CD haters understand by now that digital audio can sound good; after all, the technology has had 40+ years to mature, roughly the same timeframe as from the dawn of commercial electrical recording in 1925 to the birth of the CD. If you're determined to go to your grave hating all things digital, you probably stopped reading before you got to this footnote.

MEASUREMENTS

Before measuring the Cambridge MXN10 with my Audio Precision SYS2722,[1] I installed the StreamMagic app on my iPad mini. After the Cambridge's Ethernet port had been connected to my network, I used the app to perform a factory reset and check that the firmware was up to date. I measured the Cambridge using test-tone files stored on a USB stick plugged into the processor's rear panel or via my network with Roon. (The Cambridge is a Roon Ready device.) TF told me that he auditioned the Cambridge with its output level set to Fixed, so all the testing was performed in that mode. I then used the app to enable Preamplifier mode and repeated some of the tests at various volume control settings. (The StreamMagic app's volume setting was echoed by the Roon app.)

In both Fixed mode and in Preamplifier mode with the volume control set to the maximum of "100," the MXN10's maximum output level at 1kHz was 2.1V into 100k ohms. The app's volume control operated in 0.75dB steps—a setting of "80" reduced the analog output level by 15dB. (The volume control doesn't affect the output level at the S/PDIF digital outputs.) The MXN10's single-ended output preserved absolute polarity (ie, was noninverting), and the output impedance was a moderately low 437 ohms from 20Hz to 20kHz.

Fig.1 shows the MXN10's impulse response with 44.1kHz data. The reconstruction filter appears to be a long minimum-phase filter, with all the ringing following the single full-scale sample. This filter's ultrasonic rolloff (fig.2, magenta and red traces) reaches full stop-band attenuation at 24kHz with the aliased image at 25kHz of a full-scale tone at 19.1kHz (cyan, blue) suppressed by 87dB. The harmonics associated with the 19.1kHz tone all lie below –96dB (0.0015%). Fig.3 shows the MXN10's frequency response with data sampled at 44.1, 96, and 192kHz. The response with

1 See stereophile.com/content/measurements-maps-precision.

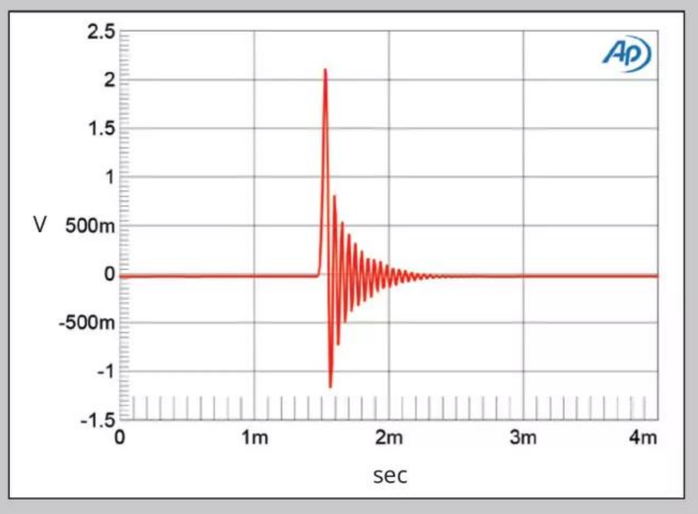


Fig.1 Cambridge MXN10, impulse response (one sample at 0dBFS, 44.1kHz sampling, 4ms time window).

Don't Go Round and Round

DETERMINE YOUR DESTINATION

PLAN YOUR HIFI JOURNEY

GREAT SOUND AWAITS!

System Advice — New & Pre-Owned — Setup and Installation

audioultra

Trusted by Our World Class Audio Partners

audio-ultra.com | 253-321-3204 | info@audio-ultra.com

Underwood HiFi

VALUE INNOVATION IN HIGH END AUDIO

AN AMPLIFIER FOR A LIFETIME
THE EMERALD PHYSICS 600.2SE

INTRODUCTORY PRICED AT

$1999

DELIVERED ANYWHERE IN THE WORLD
600 WATTS/CHANNEL POWERHOUSE
SELECTABLE TUBE OR SOLID STATE FRONT END

Part Time Audiophile summed with:
"At the price point of the Emerald Physics amp, I can't really uncover any shortcomings worth mentioning. It's really just a great amplifier, and I can't say enough positive things about it. Because of its tremendous value and overall superb performance, I'm unabashedly nominating the Emerald Physics 600.2SE amplifier for a Reviewer's Choice Award. Another win to Underwood Hi-Fi!"

Audio Pursuit summed with:
"The EP600.2SE is a perfect example of the value that Class D amplification brings to the audio market. For $1999 with a three-year warranty, it delivers ridiculous levels of horsepower that easily drives traditionally difficult 4 Ohm speaker loads such as Magnepan without stress. Most importantly, across the entire frequency spectrum, the vacuum tubes add a wonderful level of lushness and vibrancy to the music. For those of you who crave power on a smaller budget, get your ears on the EP600.2SE. I'm looking at what excess gear to sell, as this Emerald Physics EP600.2SE has found a home!"

TONEAUDIO SUMMED UP WITH:

"It's really just a great amplifier, and I can't say enough positive things about it. Because of its tremendous value and overall superb performance, I'm unabashedly nominating the Emerald Physics 600.2SE amplifier for a Reviewer's Choice Award. Another win to Underwood Hi-Fi!"

JEFF DORGAY – EDITOR/PUBLISHER
TONEAUDIO – AUDIOPHILE APARTMENT

underwoodhifi.com | underwoodwally@aol.com | 770.667.5633

CALL OR EMAIL TO ORDER

old-school, previously all-analog system, no equipment required but a pair of interconnects.[4]

If you already have a favorite DAC, whether it's a standalone component or part of a DAC/preamp or digital integrated amplifier, the MXN10 has S/PDIF digital outputs, both RCA and optical (TosLink). As previously mentioned, it connects to your home network via Ethernet cable or Wi-Fi. The MXN10 is Roon Ready, which means it implements Roon's excellent RAAT (Roon Advanced Audio Transport); it worked well as an endpoint in my Roon-based system. If you don't pay for Roon, you can stream using Cambridge's StreamMagic app, which works on Apple and Google smartphones and tablets and natively incorporates Spotify Connect, Qobuz, Tidal, and Deezer. You can stream directly from your smartphone or tablet at CD resolution with Apple AirPlay 2 or Google Chromecast, or you can connect your device using lossy (but universal) Bluetooth. You can connect an SSD or thumb drive full of digital music files to a USB socket on the back and play those.

All that in an unobtrusive metal case with a self-contained power supply (not a wall wart) for just $500.

What the MXN10 doesn't have is a front-panel display or controls beyond an on/off switch and four Preset buttons, for one-push access to favorite internet radio stations or streaming albums or playlists, configured in the StreamMagic app. App control is the way to go.

The MXN10 has a sibling—a fraternal twin—the AXN10—with the same features and innards but a different form factor. (A Black Edition of the MXN10, with an all-black face and case, was released in October 2023; see Industry Update in the January 2024 issue.) In its product announcement, Cambridge noted, "The MXN10 offers

4 For the best-quality music streaming, an Ethernet connection is always preferred—for that, you'd also need an Ethernet cable—but Wi-Fi works, too, and that's how most people will probably use it.

measurements, continued

all three sample rates is down by <0.1dB at the top of the audioband, with then a sharp rolloff just below half of the sample rates. The response with 192kHz data continued the relatively gentle ultrasonic rolloff, reaching –3dB at 90kHz.

Channel separation was superb, at >103dB in both directions below 2kHz, and was still 96dB at 20kHz. Fig.4 shows the spectrum of the MXN10's low-frequency noisefloor as it drove a full-scale 1kHz tone. The level of the random noise is extremely low and while some AC supply-related spuriae are present, these all lie at or below –114dB. As the frequencies of these spuriae are 60Hz and its odd-order harmonics, they are probably due to magnetic interference from the power transformer.

An increase in bit depth from 16 to 24, with dithered data representing a 1kHz tone at –90dBFS, dropped the MXN10's noisefloor by >20dB (fig.5), which implies a resolution of almost 20 bits. This is superb performance for such an inexpensive D/A processor. Repeating this test in Preamplifier mode with the volume control set to –20dB didn't significantly reduce the

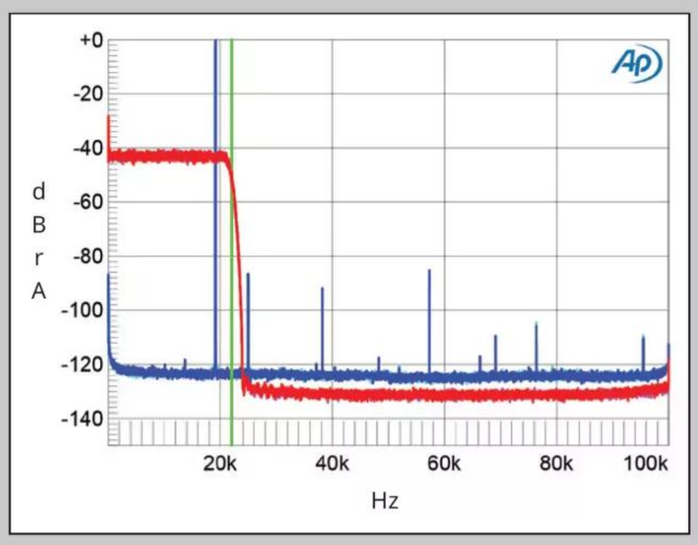


Fig.2 Cambridge MXN10, wideband spectrum of white noise at –4dBFS (left channel red, right magenta) and 19.1kHz tone at 0dBFS (left blue, right cyan) into 100k ohms with data sampled at 44.1kHz (20dB/vertical div.).

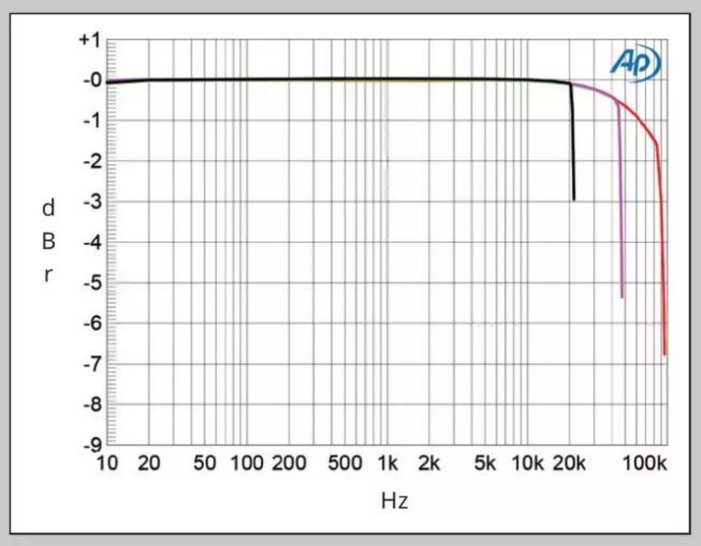


Fig.3 Cambridge MXN10, frequency response at –12dBFS into 100k ohms with data sampled at: 44.1kHz (left channel green, right gray), 96kHz (left cyan, right magenta), and 192kHz (left blue, right red) (1dB/vertical div.).

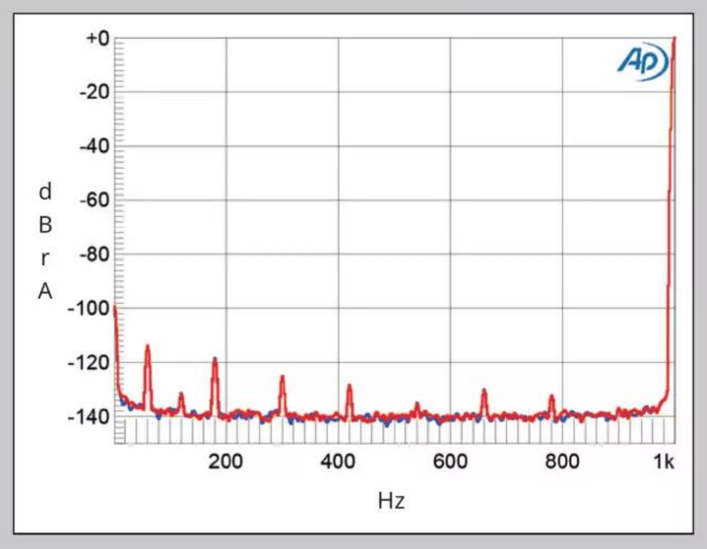


Fig.4 Cambridge MXN10, spectrum of 1kHz sinewave, DC–1kHz, at 0dBFS (left channel blue, right red; linear frequency scale).

Close your eyes...
You are there...

Anne Bisson

VAC

Always handcrafted in the USA

Contact us for the name of your nearest VAC dealer.

Valve Amplification Company **www.vac-amps.com**

Jean-Francois La Forge Photographe

©2023 Valve Amplification Company, Inc. VAC power amplifiers are protected by US Patent 8,749,310. International patents pending.

the same features and functionality in a more compact form factor, making it a discreet and easy way to add streaming to any music system—including bringing vintage kit bang up to date." Tuck it behind your Marantz 7B, plug into an AUX input, and no one will know your system has entered the 21st century.

Under the hood is Cambridge's fourth-generation StreamMagic module, built around a Quad core ARM Cortex-A53 1.8GHz CPU. This little computer routes the streams of bits and bytes from the interwebs, attached drive, or the local network to an ESS Sabre ES9033Q DAC chip, where the bits and bytes (PCM or DSD) get converted to an electrical representation of two-channel music, or toward those coaxial and optical S/PDIF transmitters. The computer interacts with the phone app via the home network. Use your phone to select and play music, and inside that little metal box, the MXN10's computer takes care of things, and music emerges.

Up and running

I reviewed a Black Edition MXN10. I used the StreamMagic app or Roon (the server running on my office desktop computer, the control app on my phone), pulling data from my music library master hard drive, connected to the computer via USB. The library is mirrored on my NAS, which served as the source for local-network audio I streamed. Using the StreamMagic app, I signed into my Qobuz account, allowing direct control of Qobuz through StreamMagic. The same can be done with Tidal and Deezer. In the case of Spotify, you select the MXN10 as the destination "speaker." Spotify Connect then uses the Spotify app as the control interface, but the MXN10 communicates directly with Spotify's servers and the datastream is flowing directly through the MXN10 without first passing through your phone. During the course of this review, I used an older iPad and my iPhone 15 as remotes for StreamMagic and Roon. I even ran

measurements, continued

resolution. When I played undithered data representing a tone at exactly –90.31dBFS, the waveform was symmetrical, with negligible DC offset, and the three DC voltage levels described by the data were relatively free from noise (fig.6).

As seen in fig.2, the MXN10 produced very low levels of harmonic distortion with full-scale data (fig.7). The subjectively benign second and third harmonics were the highest in level, but each lay below –100dB (0.001%). Intermodulation distortion with an equal mix of 19 and 20kHz tones at –6dBFS was similarly extremely low, even into the punishing 600 ohm load (fig.8). All the intermodulation products lay at or below –107dB, which is lower than the levels of the aliasing products at 24.1kHz and 25.1kHz!

Fig.9 shows the spectrum of the MXN10's output when it was fed high-level 16-bit J-Test data via my network. The same data played back from the USB stick gave an identical result. All the odd-order harmonics of the undithered low-frequency, LSB-level squarewave lie at the correct levels, and no other sideband pairs are visible. Commendably, the central spike that represents the high-level tone at one-quarter the sample rate (Fs/4) isn't broadened

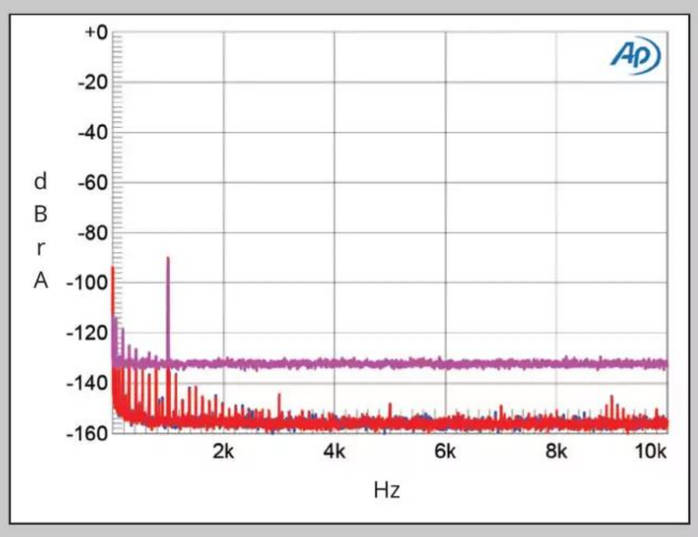


Fig.5 Cambridge MXN10, spectrum with noise and spuriae of dithered 1kHz tone at –90dBFS with: 16-bit data (left channel cyan, right magenta), 24-bit data (left blue, right red) (20dB/vertical div.).

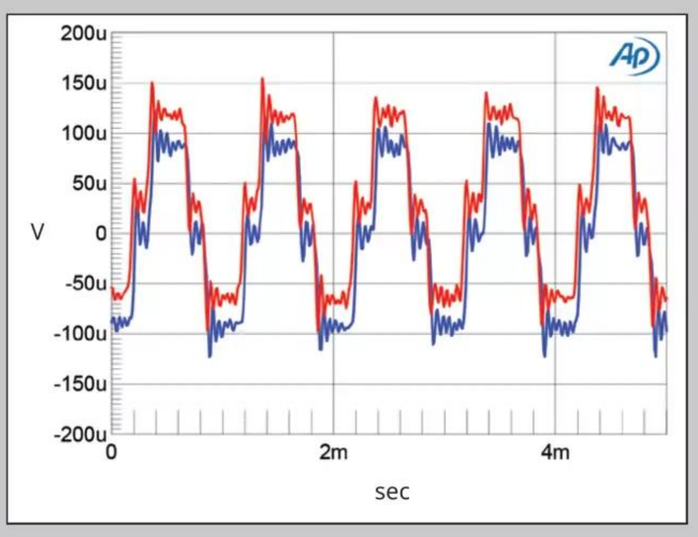


Fig.6 Cambridge MXN10, waveform of undithered 1kHz sinewave at –90.31dBFS, 16-bit data (left channel blue, right red).

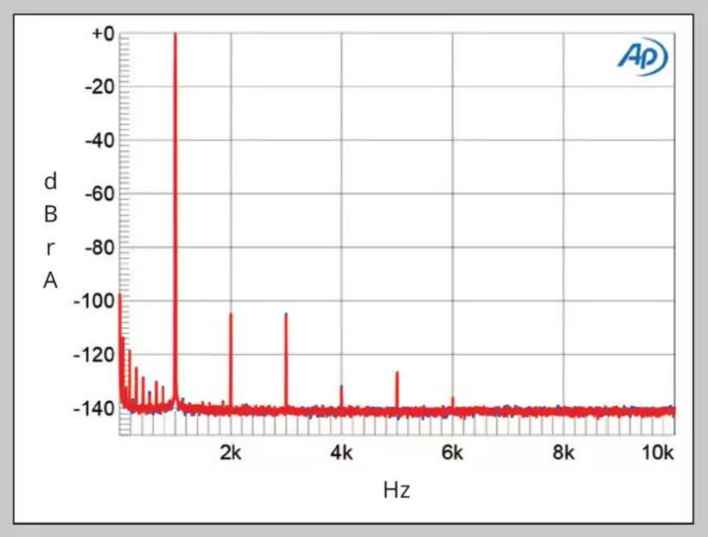


Fig.7 Cambridge MXN10, 24-bit data, spectrum of 50Hz sinewave, DC–1kHz, at 0dBFS into 600 ohms (left channel blue, right red; linear frequency scale).

HARMONIA DISTRIBUTION

WE PLACE PRODUCTS FROM THE WORLD'S LEADING AUDIO BRANDS WITH THE MOST KNOWLEDGEABLE AND WELCOMING RETAILERS IN THE COUNTRY.

WE BACK THIS UP WITH DEDICATED SALES AND SUPPORT TEAMS.

WE PROUDLY REPRESENT:

PrimaLuna®

FYNE AUDIO

PATHOS

booster
The audiophile power supply solution

Cabasse

KISEKI

HARMONIADISTRIBUTION.COM | INFO@HARMONIADISTRIBUTION.COM | 909.931.0219

StreamMagic on a decommissioned iPhone 7s.

Cambridge provides a quick start guide in the box; a detailed manual is online.[5] The first step was setting the MXN10 connected to my Wi-Fi network. In the Apple ecosystem, this is achieved by setting it as a new AirPlay device, then downloading the StreamMagic app and following its setup procedure. After this initial setup, firmware updates took place automatically when I wasn't using the device. As part of the setup procedure, the MXN10 asks permission to join your Wi-Fi network via your phone. Once it's signed in, it's good to go.

Warning to the impatient: The setup procedure may require a firmware update, which takes a long time. As my wife says, pull on your patient pants and sit tight. Being the impatient sort, my first move when I unpacked the MXN10 was to connect via Bluetooth and stream some music from the Qobuz app on my phone. This no-fuss approach yielded instant satisfaction and confirmed that the thing worked, but if that's as far as you're going, just get a nice Bluetooth speaker and be done with it. The point of devices like this is all the other stuff they do.

StreamMagic is similar enough to dCS's Mosaic app, which I use all the time with my Bartók streaming DAC, that it didn't take long to figure out. The Library tab lists all the streaming sources, and the app connects transparently to MinimServer running on my NAS, same as Mosaic. I started playing files from my digital library, with the MXN10 connected to a McIntosh MA6500 integrated amplifier in my old-school office system; its only permanently connected digital component is a Rega Jupiter CD player. This system usually plays CDs and vinyl, but can also connect to my office computer via a Grace m900 DAC/preamp.

With the StreamMagic app, I had no problem exploring and navigating networked storage. To search for an artist, click the Artists tab in the NAS library top display and a search box appears at the top of the list. (Roon users may scoff at this, and I'll admit

that Roon's primary strength is its robust and universal search function, which ties together your library and your Qobuz and Tidal accounts. Roon, though, costs $15/month; the StreamMagic app is free.)

My next move was to sign into my Qobuz account in StreamMagic. Once that was done, integration between the streaming service and the Cambridge app was seamless. I assume the same is true with Tidal and Deezer accounts.

Time for some serious listening

I noticed down in the office system, including listening through headphones, that the MXN10's built-in DAC sounds damn good. I tried playing a CD in the Rega Jupiter and streaming the rip of that

5 See manuals.cambridgeaudio.com/mxn10.

measurements, continued

at its base. Repeating this test with 24-bit data gave a similarly superb spectrum (not shown).

Finally, I examined the quality of the optical and coaxial S/PDIF outputs. Both operated with data sampled at rates up to 192kHz, and the datastream was clean, with a wide-open eye pattern, plotted over one "unit cycle" with 44.1kHz data (fig.10).

The average jitter level, assessed with a 50Hz–100kHz bandwidth, was a low 389 picoseconds (ps) from the optical output and 340.5ps from the coaxial output. (The latter is identical to what I measured when I looped the Audio Precision SYS2722's S/PDIF output to its coaxial input.)

Cambridge's MXN10 offered superb performance on the test bench, considering not only its very affordable price but also the fact that the circuitry and power supply are housed in a small chassis. The latter makes it difficult for the designer to avoid interference and maximize resolution. That the MXN10 performs as well as it does suggests that Cambridge Audio has some serious engineering talent in-house.

—John Atkinson

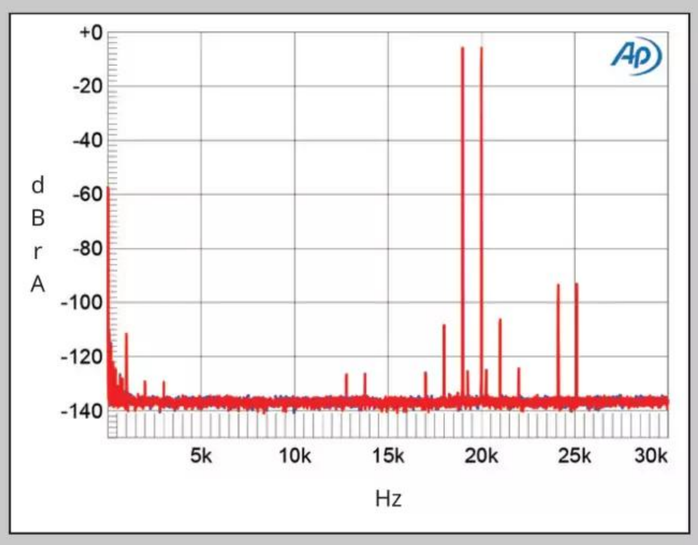


Fig.8 Cambridge MXN10, 24-bit data, HF intermodulation spectrum, DC–30kHz, 19+20kHz at 0dBFS into 600 ohms, 44.1kHz data (left channel blue, right red; linear frequency scale).

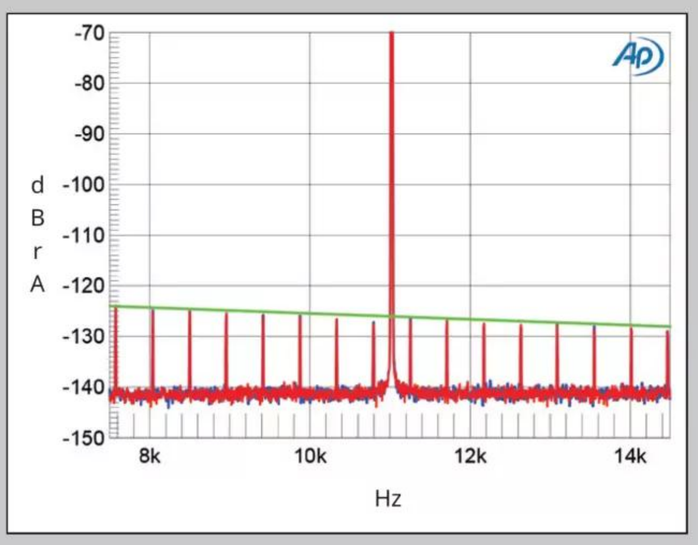


Fig.9 Cambridge MXN10, high-resolution jitter spectrum of analog output signal, 11.025kHz at –6dBFS, sampled at 44.1kHz with LSB toggled at 229Hz: 16-bit network data (left channel blue, right red). Center frequency of trace, 11.025kHz; frequency range, ±3.5kHz.

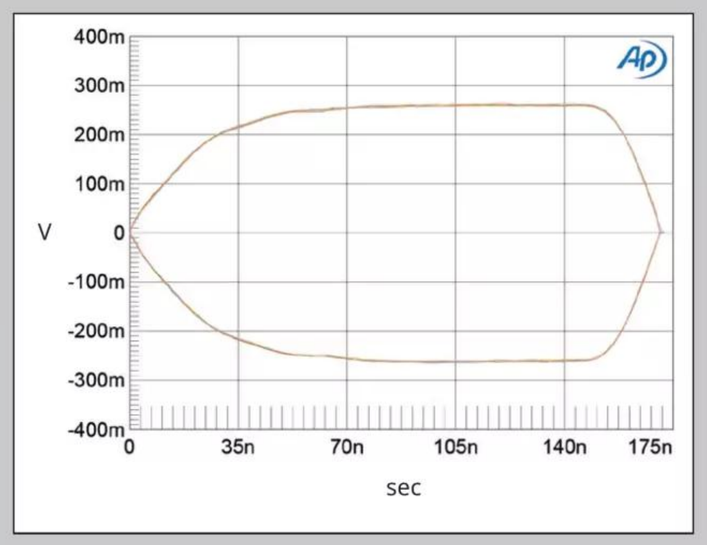


Fig.10 Cambridge MXN10, eye pattern of coaxial S/PDIF output carrying 16-bit, 44.1kHz J-Test data (±400mV vertical scale, 175ns horizontal scale).

NORDOST

For the last 30 years, Nordost has been at the zenith of cable design and development, and throughout that time it has stayed true to its core; producing low-mass cables with optimal signal transfer speed and ideal impedance matching.

— Hi-Fi+

AXPONA
AUDIO EXPO NORTH AMERICA

COME HEAR US
Schaumburg F and Room 716

LEARN MORE
www.nordost.com

CD from my NAS library, switching back and forth on the McIntosh amplifier. The output levels sounded about the same and looked the same with the McIntosh's trademark blue analog meters, so I figured it was a legitimate comparison. I heard no difference, through speakers or headphones. Both the CD itself and the stream of its rip sounded great. I have always liked the Rega's built-in DAC, so the MXN10's matching its good sound impressed me.

After a few days playing with the MXN10 in the office, I took it upstairs and connected it to my main system. I ran coaxial S/PDIF to my dCS Bartók and the MXN10's analog outputs to my Benchmark LA-4 preamplifier. I carefully matched levels of the Bartok's balanced outputs to the MXN's unbalanced outputs using pink noise and a level meter; the MXN10 analog output had to be set 6dB lower than the Bartók to achieve equal output. With all adjusted, switching back and forth between the full MXN10 sound (streamer plus DAC, analog output) and the MXN10 with the Bartók (via the MXN10's S/PDIF output) was simple and level neutral.

I was in a jazz mood, so I streamed 192/24 recent remasters of three different albums: Yusef Lateef's 1961 album *Eastern Sounds* (Craft Recordings' new reissue of Prestige/Moodsville MVST 22); Herbie Hancock's *Crossings*, from 1972 (Rhino, HD reissue of Warner Brothers BS 2617); and Ornette Coleman's 1960 album *Change of the Century* (Rhino, HD reissue of Atlantic 1327). I had recently spun the new all-analog reissue LPs of the Lateef from Craft's Original Jazz Classics series and the others from Rhino's High Fidelity Vinyl series.

I heard differences between the MXN10's analog output and the output from the MXN10-Bartók combo. The Bartók's soundstage was more clearly defined, each sound or instrument in sharp focus, the dense mix on the Hancock album better sorted. From the MXN10's built-in DAC, the focus was a touch hazier. Also, the boomy part of the low end was a bit more pronounced with the MXN10 performing DAC duties, especially with Charlie Haden's bass on the Coleman album. None of these differences were dramatic; I would describe the difference as akin to a photo in a magazine printed with a dot-screen compared to a scan of that photo using a descreen filter. There's a bit of blurring—not enough to make the photo less understandable but enough to obscure small details. The unique textures of Lateef's "Chinese globular flute" (as described in the liner notes) were more distinct via the dCS DAC, as was the sound of the Indian rabat played by bassist Ernie Farrow on the track "The Plum Blossom."

I was surprised how well the MXN10's converter and analog output stage stood up in comparison to the Bartók. A careful listener probably will favor the Bartók's improved detail and tighter low end, much as an auto enthusiast may well favor a top-line Lexus sports sedan over a Toyota Corolla even though both are well-built, reliable cars. Let me stress how unfair a comparison this is and let me say again, the MXN10's built-in DAC sounds damn good.

Moving to Roon, I rolled through several versions of Pink Floyd's *Dark Side of the Moon*. The Roon app's "versions" tab made this comparison quick and easy; it also listed several Qobuz-streaming versions that I didn't explore.

I am not impressed with the latest, 50th-anniversary reissue; it sounds like the master tape is worn out and the top end is gone. I compared the 24/96 Qobuz stream to several versions on my server: a rip of a run-of-the-mill Capitol/EMI CD from the 1980s; a rip of the Mobile Fidelity Gold CD; a rip of the CD layer of the 2003 25th Anniversary hybrid SACD; and my needle drop of the Mobile Fidelity LP. I favored all the earlier versions over the latest, the 2003 CD and the MoFi LP standing out as favorites. My two favorites sounded different from each other—the MoFi LP has a suck-out of the midrange, and the 2003 CD is louder—but both were pleasing, and there was plenty of top end. In comparison, the old Capitol and MoFi CDs sounded washed-out and thin. These sonic differences were clearly audible through the MXN10, and I enjoyed spending careful-listening time with one of my all-time favorite albums.

Now I returned to switching back and forth between the MXN10's DAC and the MXN10's digital output converted by the Bartók DAC, streaming the Qobuz playlist *Total Grunge*,[6] which contains tracks of different resolutions. The dCS would mute for a moment when the sample rate or bit depth changed. This didn't happen with the built-in DAC or when music was streamed directly through the Bartók. Apart from that, this grunge-rock playlist peeled the paint in a satisfying way, with a slight sonic edge to the much more expensive Bartók DAC for clarifying these 1990s all-loud-all-the-time mixes.

My final test was to play files via the MXN10's USB connection. Cambridge's Simon Osborne-Walker, head of global PR, told me that the USB socket provides up to an ampere of current, twice the USB standard for computers. That means that any buss-powered drive should work fine and not overtax the MXN10's power supply.

I plugged in a 4GB Western Digital Elements drive packed full of backup audio from my studio. It was recognized and appeared in the My Library tab of the StreamMagic app. I easily navigated the file system and played music for an hour, ranging from 16/44.1 to 24/192 PCM and DSD. I heard no hitches or hiccups. This USB connectivity is ideal if you already have, for instance, an iTunes library or have been stockpiling CD rips on a USB hard drive or SSD. Because the StreamMagic app presents a different way of looking at and searching the contents of the drive compared to the Windows PC desktop, I found myself listening to master files and analog-to-digital transfers I had done years ago and enjoying the revisits. The MXN10's sound was what I expected to hear, meaning it did its job and presented content for which I sweated the details as I remembered hearing it.

Cross that bridge

The Cambridge Audio MXN10 packs a lot of functionality and high-quality audio into a small, inexpensive box. It's a streamlined way to add streaming to just about any system, no matter how old-school. The StreamMagic app is well designed and allows access to a range of streaming services and files stored locally, connected directly or on your local network. The MXN10 works perfectly with the robust and powerful Roon app, assuming you have an account and a Roon server in your network. Its built-in DAC offers high-fidelity sound and because there's a DAC built in, the MXN10 mates well with even a predigital sound system.

In short, the MXN10 is a thoughtfully considered, high-performance bridge to the future-present, at a price that's friendly to most budgets. Once you get your feet wet with streaming, you might find it's like the river of whiskey in the old blues tune: You'll dive to the bottom and never want to come up. ■

ASSOCIATED EQUIPMENT

Digital sources dCS Bartók streaming DAC, Oppo DV-981HD universal disc player, Rega Jupiter CD player.
Preamplifier Benchmark LA-4.
Power amplifier Benchmark AHB2.
Integrated amplifier McIntosh MA6500.
Loudspeakers and headphones B&W 801 D4 Signature, B&W 808, Amphion One18; Sennheiser HD 650, AKG K240.—**Tom Fine**

6 See open.qobuz.com/playlist/3291132.

The Gryphon Diablo 333

Perfection, Redefined

THE GRYPHON

www.gryphon-audio.com

JIM AUSTIN

Silent Angel Bonn NX

NETWORK SWITCH

With every passing season, a new audiophile-grade network switch hits the market. These products, which can cost hundreds or thousands of dollars, do the same basic thing as network switches bought at Best Buy for $30 or so (except, in some cases, slower), but their manufacturers claim they are built to a higher standard to achieve better sound.

As with all signal-conditioning devices that operate completely in the digital realm—especially those that work at packet level (more correctly referred to as "frame-level" on the local side of the router, but that's a distinction that even few experts make)—the sonic efficacy of audiophile network switches is debated, the debate being, as usual, mainly between those who insist they hear a difference and those who insist, on theoretical grounds, that no difference is possible.[1]

Years ago, I almost certainly would have been on the side of those who refused to listen on theoretical grounds. Since then, several things happened. As I got older and gained experience, I learned that I'm not as smart as I thought I was when I was younger. With this came a greater acceptance of uncertainty, a willingness to give up the certainty of scientific proof and accept things with less evidence than, say, a rigorous double-blind test.[2] In this I am not alone in this industry: I often ask and have found it quite rare for those working in hi-fi R&D to require such rigorous evidence. They cultivate their listening skills, then believe and accept what they hear.

The next thing that opened my mind was a series of demonstrations of the efficacy of digital-side signal conditioning that had very clear results. The first involved replacing the power supply powering a purely digital audio server with an improved, lower-noise version, which brought about an obvious sonic change in the sound emerging from the speakers via the DAC. The second demonstration involved reclocking a USB signal. USB, like Ethernet, is a packet-based technology; to reclock a USB signal is to reclock the packets, not the audio data inside. With asynchronous USB transmission, the data are reclocked by the receiving device anyway—yet, again, I heard a clear change in the musical presenta-

1 There is, I'm happy to say, a third group: those who listen carefully and hear no change but have the humility *not* to assume that's definitive evidence that such devices are snake oil. These few admirable souls admit that just because they can't hear it, or haven't heard it yet, that doesn't mean it can't possibly work.

2 I'm quite happy to dismiss without listening any proposed tweak that requires a mystical or paranormal "mechanism," something beyond physics, and there have been plenty of those over the years. I'm merely saying that I need not have a clear, specific physical mechanism in mind to accept the evidence of my senses. The specific explanation can come later. JA and I have both written about this previously; see, for instance, bit.ly/AudioDragons, bit.ly/NotTooWonderful, and bit.ly/AudioMeetScience.

SPECIFICATIONS

Description 8-port, 100/1000Mbps Ethernet switch with gold-plated GbE RJ45 connections, 25MHz Word Clock input, grounding port, and TCXO clock module.
Dimensions 17.3" (439mm) W × 2.5" (63mm) H × 10" (250mm) D. Weight: 14.3lb (6.4kg).
Finish black, silver.
Serial number of unit reviewed K230100001. Designed and manufactured in China.
Price $3995. Approximate number of US dealers: 12. Warranty: 2 years, parts and labor.

Burmester

The Power of Communication

The 216 and 218 Power Amplifiers combine Burmester's technical experience at the pinnacle of amplifier deisgn with emotional connection and musical communication. Featuring traditional German handcrafted build quality with minimalist styling, innovations borrowed from the flagship 159 mono amplifier and breathtaking dynamic power and detail, they represent the epitome of technological application and aesthetic design.

216 POWER AMP

TOP LINE

218 POWER AMP

REFERENCE LINE

VISIT OUR DISTRIBUTOR OR RETAILER NEARBY TO EXPERIENCE THE 216 & 218 IN PERSON.

tion, which I never would have expected.

These experiences, but especially the last, opened my mind to the possibility that signal conditioning at the packet (rather, frame) level could bring about changes (and perhaps improvements[3]) in the sonic presentation, via mechanisms that aren't yet known but that need not involve angels, demons, or poultry sacrifice.

The Silent Angel Bonn NX

I chose this device for my first network-switch test because it is the most ambitious I've encountered. If you're going to judge the sonic efficacy of new technology, you might as well start with one that seems the most likely to make a difference.

The Bonn NX ($3999) comes from the same Chinese company, Silent Angel, that makes the much less expensive Bonn N8 Pro ($599), which gained audiophile attention a few years ago. Silent Angel also makes servers, streamers, linear power supplies, and a few other things.

To quote Anthony Chiarella, Silent Angel's US agent, the cheaper N8 Pro "was conceived as an entry-level product and built to a price point, whereas the NX was conceived and built as a state-of-the-art product with cost no object." The two devices utilize the same core electronics—the same switching board (about which more in a moment)—but in the NX, both the power circuit and the clocking circuit were redesigned, the former to achieve lower noise and the latter to use what designer Chorus Chang calls "direct clock" technology.

What is "direct clock" technology? The N8 Pro utilized a 10MHz clock source, which must be converted to 25MHz to drive a 10/100/1000Base-T network switch.[4] The NX, in contrast, uses a 25MHz clock, so no conversion is necessary. That 25MHz clock is of the TXCO variety and promises an "extra-low phase noise output." There's a 25MHz word clock input (and Silent Angel makes an external word clock that operates at 25MHz, the Genesis GX), presumably for when you want to coordinate the network switch's operation with other devices on the network, as is sometimes done in recording studios.

Where the NX goes farthest beyond the N8 Pro, in my judgment, is in its mechanical design. The N8 Pro was basically a board in a box with rubber feet. The NX enclosure is a sophisticated design intended to reduce vibrations. The chassis is double-layer, the inner layer made of unspecified "metal," the outer of aluminum, with vibration-dampening spacers in between. The NX's feet are very wide—2.36"—and made of stainless steel with embedded, vibration-reducing rubber O-rings.

But what about that core switching circuit? How is it improved? It was, Silent Angel says, "purpose-engineered for high-resolution streaming networks" and "delivers a high-purity signal to connected components, for a performance unattainable with typical network switches." The clock has its own power source, isolated from the power source for the switching circuit. There's a choke to remove high-frequency noise from the AC line. (A choke would work both ways, also keeping noise from the NX off the AC line.)

And the switching board itself? Chorus Chang told me in an email that "the switch board design is optimized to lower the crosstalk between ports and also to lower the noise from the digital part to the analog part. (The Ethernet signal is an analog signal.) As a result, the Ethernet signal quality is better." These improvements are common to both the Bonn NX and the N8 Pro.

The NX has an external clock input, presumably superior to the internal clock. Use of an external clock raises the perpetual question of which is more important, clock accuracy or clock proximity. The NX can also utilize an external power supply. (The one built in is said to be a "radar-grade" switching supply; radar-grade seemingly implies very low noise.) There's a ground lug to further reduce noise by providing a low-impedance path to ground for the enclosure.

$4000 is a lot for a network switch, but there's a lot going on in this one. The key question is whether any of what's going on matters sonically.

The sound of networks switching

I have a relatively simple networking setup. One network supports my audio system and my other network activities—though when I'm listening intently, there's little nonmusical network activity beyond the occasional email (at which time my attention is diverted anyway). I'm tempted to turn off Wi-Fi when I listen seriously, but I usually keep it on, since it supports network-audio "remotes" such as Roon's. I'm not a tablet guy; my Mac laptop is my preferred "remote." I did turn off Wi-Fi briefly to compare, but I left it on most of the time.[5]

During the time I was auditioning the Bonn NX, a standard, high-quality CAT6 Ethernet cable—not an audiophile cable—ran from my router in a back room to the Bonn NX; from there, CAT6 cables went, variously, to my Roon Nucleus+, an Innuos Statement server-streamer, and directly to one of two streaming DACs: the CH Precision C1.2 followed by the Bel Canto Black (in for review). Another CAT6 cable went to a separate, inexpensive network switch 6' away, which services my nonmusical networking needs including a Wi-Fi access point.

In the late 1990s, I engaged in some basic ear training by ABXing MP3 samples at various bitrates, attempting to choose the full-resolution samples over lossy-compressed samples. Those samples, I recall, were the usual MP3-judging fare including "Fast Car" and the notorious jangling keys. At first, I was rather bad at it—then I began to notice specific anomalies in the compressed samples that

3 I'm being careful not to call any change an improvement. The first key question is whether there is any change at all—a matter of fact if not easily verifiable. Improvement or not is subjective: Some may prefer separation while others prefer continuity. Indeed, at the first demo described above, one audience member insisted that the putatively inferior power supply resulted in the best sound. I didn't hear it that way, but I was not inclined to argue. You should seek the sound that you prefer.

4 I'm no networking expert, but it isn't clear to me why the N8 Pro uses a 10MHz clock, nor how widespread the use of 10MHz is in audiophile network switches. 10MHz seems to be common for external word clocks in digital audio sources and is often used internally. Silent Angel's literature makes cryptic reference to the satellite guidance system known as GPS; it may be that this 10MHz clock is derived from the universal "atomic clock" that GPS utilizes. None of which fully explains why the N8 Pro uses 10MHz when by default, generic network switches need 25MHz, whether they achieve it directly or by converting 10MHz.

5 Wi-Fi is a notorious source of high-frequency noise, but in my NYC apartment building, turning it off removes only the most intense and local EM radiation source. Currently my MacBook Pro is detecting nine other networks in this and surrounding buildings.

EXCEL | audio

EXCEPTIONAL AUDIO SYSTEMS

MIKE'S A+ RECOMMENDED COMPONENTS

ALL NEW! WILSON AUDIO ALEXIA V

Now available for audition is Wilson Audio's long awaited replacement for the Alexia 2, the Alexia V. While similar in appearance to its predecessor, the new speaker has many changes that take the sonic performance to the next level. Featuring V material, accoustic diodes, a quadramag midrange driver, plus many other features too numerous to list, the Alexia V must be heard to be believed. Stop by Excel and take a listen. You'll be glad you did.

MSRP $67,900 standard colors

Excel is now open 10-6 Monday-Saturday.

BAT VK 80i INTEGRATED AMP

New From BAT. Fantastic sounding all-tube integrated amp utilizes the same 6C33C-B output tubes as the top-of-the-line REX 3 amp. Conservatively rated at 55 watts per channel of pure triode goodness, this amp produces crazy good sound. The VK 80i driving the new Sabrina X's is downright amazing. All BAT products including the fabulous REX 3 amp/preamp are available for audition at Excel.

MSRP $9,995.00

NEW MODEL DCS BARTOK APEX

The new dCS Bartok Apex is first and foremost a state of the art network streaming dac. With the addition of a unique headphone amplifier it brings the dCS experience to both headphone and stereo listeners. This level of digital playback has never been available at this price point. Feel free to bring in your favorite headphones for a listen.

MSRP $20,950.00 w/o headphone amp
$22,950.00 with headphone amp

Come in and browse through our vinyl records. Excel has the largest selection of audiophile vinyl in southern CA. Titles from Analogue Productions, Impex, MoFi, and many more.

EXCEL | audio
Authorized Dealer of

AMG • Audio Research • Aurender • B&W • BAT • Chord • Clearaudio
D'Agostino • dCS • Esoteric • Gold Note • Harbeth • HiFi Rose • Isotek
Klipsch • Koetsu • Levinson • Line Magnetic • Luxman • MoFi • Nagra
Nordost • Rega • SME • Technics • Western Electric • Wharfedale
Wilson Audio…and more

Located at 4678 Campus Dr., Newport Beach, CA 92660.

Mike Rose's EXCEL | audio
Newport Beach, CA
949.933.1599 / excelaudio.us

weren't present on the uncompressed samples. (I don't remember what they were.) After solving the puzzle, I got it right every time, though it got harder as the bit rate got higher and the compression ratio got lower.

To be confident in any new listening test, you need to find a specific cue you can listen for. Some differences lend themselves to this while others don't, yet both kinds of changes are real. As I wrote toward the beginning of this piece, I no longer require absolute certainty to believe in something, but it remains something I aim for. The more certainty, the better.

Listening to music with the Bonn NX, I immediately[6] heard, or thought I heard, an *intensification*. Most of you know what I mean—everything seemed more vivid, even the silences ("blacker background" and all that). This was not a qualitative change but a matter of degree. Such changes are unreliable and hard to latch onto. It's hard to hold that sound in your brain, and it's the kind of change it is possible to experience just by paying closer attention to the music. This is a common reviewing hazard, and it takes experience to overcome. I have overcome it to a degree. While my confidence wasn't 100%, it was considerably better than 50:50.

Then I found a marker—a cue—although it wasn't ideal. It had to do with the structure of the soundstage especially with large-scale music such as symphonies: They had better separation between instrumental sections. By "better separation," I mean that the spaces between sections (first violins, violas, double basses) became blacker (or let's say darker gray) and deeper. This gave me something specific to listen for. I could hear the same effect, though less well, with simpler music—say, small group jazz. The soundstage had clearer layering front to back, a small improvement sonically.[7] Its main value wasn't musical; it was in increasing my confidence that the change I heard was real. I had reasonable confidence then that this network switch was affecting the sound. I would even say that the effect was an improvement. I would *not* say it was dramatic.

What the heck was going on? How could improving a network signal impact sonics? The honest answer is: I don't know. But I've asked a lot of people working in hi-fi about this, and everyone I've talked to—including designers of purely digital audiophile devices—focus on the same thing in their explanations: noise. Sometimes it's noise in the signal intrinsically. Sometimes it's extra noise due to increased computation, as in error-correction. It's rather hand-wavy and not especially satisfying—we're still lacking a specific, verifiable mechanism—but that doesn't make it wrong.

ASSOCIATED EQUIPMENT

Digital sources Innuos Statement, Roon Nucleus+ server/streamers; Bel Canto Black, CH Precision C1.2 DACs.
Preamplifier Pass Laboratories XP-32.
Amplifier CH Precision M1.2, Pass Laboratories XA60.8.
Loudspeakers Wilson Alexx V.
Cables Digital: AudioQuest Carbon & Cinnamon & Coffee (all USB); CAD USB Cable; Wireworld Platinum Starlight 8 (Ethernet). Interconnect: AudioQuest. Speaker: AudioQuest Thunderbird ZERO. Power: AudioQuest Tornado High-Current C13, NRG-X3, and Monsoon.
Accessories PS Audio Power Plant P10 power conditioner; Melco S100 and Silent Angel Bonn N8 Pro Ethernet switches; Butcher Block Acoustics RigidRack, IsoAcoustics and Magico footers.—**Jim Austin**

Conclusion

Maybe the most important question, assuming you accept my conclusion (you are of course free to listen for yourself), is how much are such changes worth? I doubt Silent Angel expects to sell the $4000 Bonn NX to people with, say, $5000 hi-fi systems; that's what the cheaper N8 Pro is for. If the value of your system is 10 times that, perhaps it starts to make sense.

A few months back, I put cable risers under my speaker cables. Was there a sonic improvement? Maybe, maybe not, but that's not why I did it. I simply liked the idea of carefully placed, well-dressed cables that weren't lying on the floor collecting dust. The routing of the cables, I decided, was worthy of detailed attention, just like everything else in my system. Think of it as a matter of hygiene, of basic hi-fi housekeeping, a gesture of respect for the system and music that gives me so much pleasure. *Paying attention* always pays dividends, in equanimity if not directly in the way the system sounds, and equanimity may be the best hi-fi tweak of all. (Its chief competitor? Bourbon, which strongly overlaps equanimity.)

A final question to consider: In the streaming age, where does your hi-fi end and your computer network begin? Is the network switch part of the system, or does it lie outside? What about the router?

What I'm getting at is, sonics aside, maybe a $30 network switch from Linksys or Netgear is a poor fit for a perfectionist audio system. A $4000 network switch may not be a good fit, either—but it might be. How much you wish to invest will of course depend on your inclinations, your resources, and the value of your system. I am reasonably convinced that a network switch can render small improvement, though I have no idea how it works. Another listener might consider the difference large, since people's sense of proportion can vary greatly.

And if you think it's overpriced snake oil? Don't buy one. ■

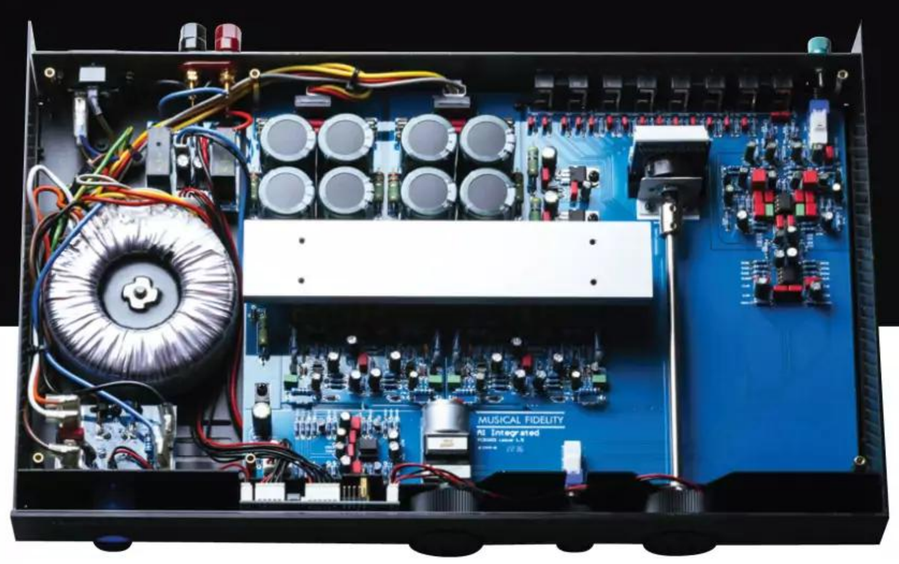
6 The idea that a network switch might sound better after break-in is too crazy even for me.

7 At least one other reviewer reported hearing improvements in transient articulation. I listened for that but didn't hear it.

MUSICAL FIDELITY

A1 | INTEGRATED AMPLIFIER

The A1 is a true Hi-Fi classic.



A1 | INTEGRATED AMPLIFIER

The A1 has one secret. This secret is simple: it makes music. It sounds sweet and fluid and creates a beautiful atmosphere around natural instruments. Especially in small to mid-sized rooms, carefully set up with a pair of great two-way speakers. It is not a powerhouse, but music lovers will cherish its abilities.

It‘s also not a product that you‘ll want to hide. A perfect example of form follows function. The oversized heatsinks define the A1‘s look, but they are essential for its operation. Truly unique, from the outside and inside.

$1,779

musicalfidelity.com | focalnaimamerica.com | Distributed by Focal Naim America | For more information: 1 800.663.9352 / info@focal-naim.com

TOM WAITS

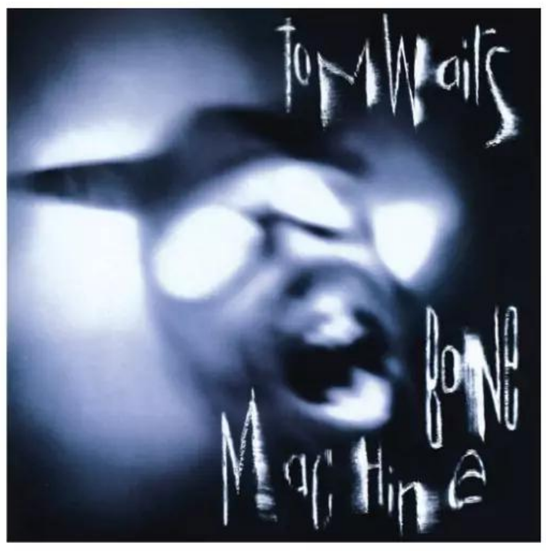
AN ALL-STAR TEAM OF ENGINEERS REMASTERS, RE-CUTS, AND REISSUES THE WIZARD-POET'S ISLAND RECORDS ALBUMS ON LP, CD, AND DIGITAL.

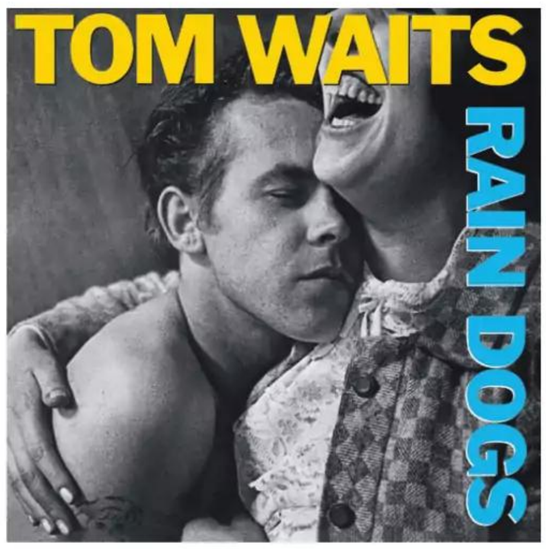
BY ROBERT BAIRD

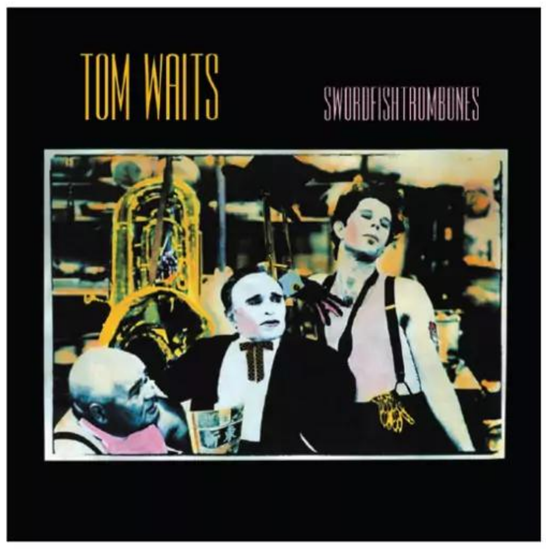
In 2022, Tom Waits decided it was time to remaster the albums he made during his stint at Island Records. The Waits classics *Swordfishtrombones* (1983), *Rain Dogs* (1985), *Franks Wild Years* (1987), *Bone Machine* (1992), and the Waits (with Robert Wilson and William S. Burroughs) musical fable *The Black Rider* (1993) are the first new remasters to be released.

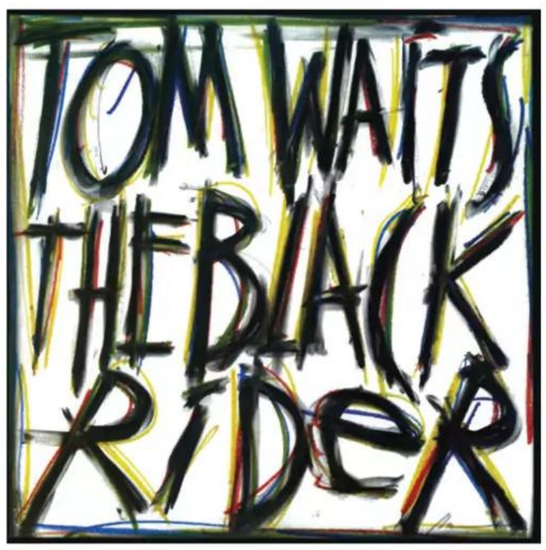
Remastered from the original tapes (except one, for which a digital source was used), all five are available on LP and CD as well as streaming and download. At TomWaits.com and UDiscover Music, the LP versions are available in colored-vinyl variations: *The Black Rider* in opaque apple red, *Bone Machine* on translucent milky clear, *Swordfishtrombones* in canary yellow, *Rain Dogs* in opaque sky blue, and *Franks Wild Years* in opaque gold. Of the seven albums Waits did for Elektra/Asylum early in his career, only *Closing Time*, recut at half-speed at Abbey Road studios, has so far been remastered. All the new UMG LPs were pressed in Burlington, ON, Canada, by Precision Record Pressing, which is owned by Czech record pressing giant GZ Media.

Below: Mastering Engineer Chris Bellman









To lead the project to remaster his catalog, the wizard-poet of sentiment and grit chose Karl Derfler, who has been Waits's chosen engineer—his third set of ears if you will, assisting Waits and his wife, Kathleen Brennan—for all new Waits recordings since 2006's *Orphans: Brawlers, Bawlers & Bastards*. Working from California, Derfler is a seasoned engineer with a résumé that's swung back and forth between music with more commercial potential like Kenny Wayne Shepherd, Dave Matthews Band, Smash Mouth, and Mötley Crüe to more eclectic projects like albums by Roky Erickson and Waits. Lately he's been working in film and television as the music business has grown less active.

"Tom was working on a song in a studio in Richmond, California, where I had my own room, and we met and he came in and cut a track with me," Derfler said in a recent interview. "I said, you don't owe me anything. If you're into it, great, if not, that's cool too. He called me back from the road and said, 'Man, this is awesome,' and since then I've been very fortunate and privileged to be part of the Waits team."

When Waits and Brennan became interested in remastering his catalog, Julianne Deery, Tom's assistant and part of his management team, asked Derfler to oversee the project. Derfler requested Chris Bellman from Bernie Grundman Mastering as the mastering engineer. "I have been working with Chris, and I think he has the versatility," Derfler explained. "I think he has an understanding of music. And Tom has such a breadth of musical genres, from soft to very hard and angular, that Chris in my opinion would be able to deal with. And the Bernie Grundman team is just spectacular; I have only positive things to say. They've remastered many records I have been involved with, and I have never had to go down there. I just know I can trust him. And if I have changes, he'll jump on it and take care of it.

"Also, there were a couple of Waits records on Rhino that Tom and Kathleen were initially very unhappy with when they first came out and had all kinds of trouble. Chris remastered them, and everything was smooth, so it was an easy pitch to get Chris to be our mastering engineer."

Typically, Derfler would have had Bellman cutting the lacquers, but another cutting engineer, Alex Abrash of AA Mastering, was brought in by Universal Music Group (UMG); as relayed by Derfler, Waits thought Abrash did a great job. Abrash's recent résumé includes remasterings of Bob Marley & The Wailers' *Songs of Freedom*, Rodriguez's *Cold Fact*, Frank Sinatra's *Watertown*, and Steely Dan's *Aja*.

Above: Alex Abrash of AA Mastering was brought in by Universal to cut the lacquers.

The focus here is on the first two Island Records releases, both career highlights. Neither *Swordfishtrombones* (engineered by Biff Dawes and Tim Boyle) nor *Rain Dogs* (engineered by Robert Musso) had serious obvious sonic flaws, so the new team's mission, as they saw it, was to enhance the overall sonic image of the original mixes while preserving the strengths of the original.

"How I got it was, we want to match if not beat the original sound," Derfler continued. "To really maintain the integrity of the OG sources that the fans love, especially this being the transition period of Tom's career musically speaking and his songwriting and so on. Not make any drastic alterations, not depart from the intent of the original mixes, but take it to the next level. There's now an added depth on the vinyl that wasn't there in the originals. And it's all subtle stuff; it's not like it's dramatic day and night. A little warmer and overall a more pleasant sound. A little more air has been added, and the whole thing just has a little more quality in my opinion."

Derfler and Deery went through the Waits archives at UMG to find the sources, some of which were, Derfler said, "kind of strewn about." While they had digital backups for all the albums, the original sources for this new remastering were $^1/_2$" or $^1/_4$" analog reels, except for *Swordfishtrombones*; for that album (despite claims in a press release about the series) Bellman worked from a 24/192 digital transfer of original tapes. Abrash used Bellman's 24/192 master files to cut the lacquers.

Bellman, who started out mastering LPs in the 1970s and has worked on thousands of records across nearly every genre, from dance music and disco to Poison, Charles Mingus, and The Band's *The Last Waltz*, has a simple equation for remasters. "I always refer back to what it was and what people have been listening to, so I don't stray too far," Bellman said in a recent interview from the Grundman shop where he was working. "I don't want to reinvent it. If I can get the source that I'm using back to what it was, or maybe it's already there, then I can make judgments on what could be better depending on what format I'm going to. If it's vinyl or SACD, there can be subtle differences."

One sonic oddity is that the original vinyl albums done in the 1980s (*Swordfishtrombones*, *Rain Dogs*, and *Franks Wild Years*) had masters that were direct metal mastering (DMM) cuts. Instead of cutting LP masters into a soft lacquer disc of aluminum coated with nitrocellulose, DMM recordings are cut into a copper plate. Primarily a European technology, DMM was something of a fad for a while in the 1980s, particularly in jazz. DMM facilitates narrower, more tightly spaced grooves, allowing the 1980s Waits albums to have very long sides. Bellman, though, is not a fan of the sound of DMM masters.

"We never jumped into it here at our studio, and we weighed it out a few times over decades back when it first came out, and it really didn't appeal to us a whole lot," Bellman said. "Now where DMM shines a little bit, for instance on *Franks Wild Years*,

the A side is 28 minutes long. So with DMM you can maybe cut a little bit louder. I'm talking like a dB or less, but there is that. But the sonics it imparts on the project are not appealing to me. It's too sterile; it loses some of the musicality. It's really apparent if you have a digital source, then it's like fingernails on a chalkboard."

For Abrash, who cut the new lacquers for the UMG reissues, matching the sound characteristics of the original DMM Waits masters made for a uniquely challenging job. "So my thing was, could I reverse engineer the DMM cuts? I studied the groove spacing. They look very good under a microscope. They're very thin, very narrow grooves. The plus thing is that you don't have pre- and post-echo," Abrash said. "For me it was about trying to match the cutting levels as close as I could to the original, not alter the audio, or as little as possible. These weren't the kind of things where you could just set it and forget it, hit the red button and go.

"The way I did it was run the lathe by hand, along with the pitch computer that's doing the job, but with me kind of overriding it and paying attention to the program material. Controlling the pitch by hand. Keep the head up, run the system in real time, do all the moves without cutting anything, and you see if you can get it before you hit the run-out groove. Then if you don't, you drop it down by half a dB. There's no fast way to do it. It's very tedious, very long. It's almost a performance in itself."

Using his reference turntable system, which employs a Technics SP-10 Mark III, "a calibrated laboratory type setup" that gives him exact playback relative to his cutting system, Abrash did direct comparisons to the original LPs. "The audio that was supplied by Chris Bellman was some of the best audio I have ever been delivered," Abrash enthused. "Terrific. And the original production team, they were just the pinnacle of audio sound. And as far as high-resolution digital audio, just superb.

Abrash would do test cuts, play them back, record them as high-resolution digital files, and send them to Derfler for his and

TOM AND KATHLEEN FELT THAT THERE WERE A COUPLE OF TRACKS ON WHICH THERE WAS A LITTLE BIT OF HARSHNESS IN THE MASTERING.

Left: To lead the remastering project, Waits chose Karl Derfler, who has assisted with all new Waits recordings since 2006.

Waits's opinions. "I wanted them to hear test cuts so they could get an idea what the noisefloor is," Abrash continued, "and how much of the sound they are going to get back. I sent them at 24/192, all high definition. It's just a rip of what it really sounds like coming out of my place.

"When I cut these high-def files, there's no DSP. Any gain adjustments are within a transfer console, no DSP at all. Did I have to use some elliptical filter, yeah, probably, to eliminate the possibility of a vertical excursion. As they were cut low, that kind of eliminates the need to do processing. I really tried to stay the hell out of the audio.

"This was not an easy one for sure. I've been doing this for 10 years, hundreds of projects, and I racked my brain over whether this situation has come up before where I had to reverse engineer a DMM cut, and I can't think of anything."

At its best, remastering can put a brighter face on a cherished masterpiece. It can freshen the sound in audible ways. In cases like the Waits catalog, where the original recordings were done well, the changes are invariably subtle but with good gear, audible. Here, with the exception of *Swordfishtrombones*, where the effect of the remastering is negligible, the remasterings are a success. What do Waits and Brennan think?

"Tom and Kathleen felt that there were a couple of tracks on which there was a little bit of harshness in the mastering, that I had Chris back off on," Derfler said, reading through his notes on each track. "Sometimes we cut in the midrange to kind of smooth the voice out a little bit. There were one or two songs when Tom asked to have his vocal dug out, but the only time he brought that up was on *Swordfishtrombones*. On the second verse of 'Trouble's Braids,' Tom felt the voice was fading away and hoped we could dig it out some without messing up the percussion part of it. On 'Town with No Cheer,' he felt there was too much harshness in the voice that he wanted backed off."

On several of the best-known tracks on *Swordfishtrombones*, the verdict from its creators was thumbs up. On "Johnsburg, Illinois," Waits's love song to Brennan, his comment was "Beautiful," Derfler says with a chuckle. In "16 Shells from a Thirty-Ought Six": same comment. For "In the Neighborhood," Waits's response was, "Sounds great."

"Tom and Kathleen, their ears are unbelievable, but they are so diverse," Derfler explained. "Kathleen is very sensitive to low frequencies and high frequencies, so she hears certain things that us males might miss." On *Rain Dogs*, Waits and Brennan perceived some issues with volume: In the original mastering, there was a dynamic from song to song that they felt was lost.

"'Big Black Mariah,' they felt, was a little too loud," Derfler continued. "The same for 'Hang Down Your Head.' Kathleen felt the bass on 'Time' could have been a little deeper sounding. In 'Downtown Train,' they felt there could have been a little more presence in the midrange.

"Waits recordings are very dynamic; it's all about performance," Derfler continued. "Everything goes down live. Rarely are overdubs involved. Tom and Kathleen really get a feeling, a vibe going, and try to capture that. And then there will be things like, I think we need a touch-up here and a touch-up there; let's bring out the midrange of the upright bass. They will make it clear to me or any engineer that they're not getting the sound they are looking for out of a specific instrument."

"To me Chris [Bellman] opened it up; somehow he removed some of the veil that was on the original vinyl," Derfler concluded. "While the original mix was brought back and reproduced properly, there's a little more dimension and certain things are made more distinct."

"My experience is that Tom and Kathleen look at it from song to song and don't try to emulate anything they've done in the past. I've never been asked, can you get me this sound that I heard on this record? But they know what they want, I can tell you that!" ■

EMOTIVA®

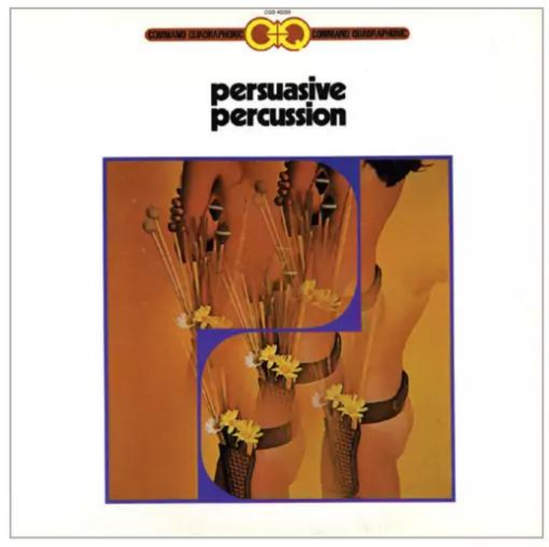
Powerful. Flexible. Modular.

XPA-2 Gen3 Stereo Power Amplifier

- 300 watts RMS/channel @ 8 Ohms
- 490 watts RMS/channel @ 4 Ohms
- Optimized Soft-Switch Class H™ Design
- 3 kW Switch Mode Power Supply
- Class AB Amplifier Modules

- Fully Modular & Upgradable
- Audiophile Grade Fault Protection
- Designed & Assembled in USA
- 5 Year Parts & Labor Warranty
- 30-Day Risk Free Trial Period

$1199 at emotiva.com



THE FOREVER HALF-LIFE OF QUADRAPHONICS

HAPPILY, THIS SHORT-LIVED 1970s FAD MAY NEVER DIE.

BY TOM FINE

The popular history of quadraphonics (4-channel sound from LP records, tapes, and radio broadcasts) chronicles a spectacular failure. The major record labels, led by CBS/Columbia and JVC/RCA, invested millions in ill-fated schemes to convince music lovers to ditch 2-channel stereo for 4-channel surround sound. The concept was killed, so the story goes, by competing and incompatible LP formats, high prices on the better-sounding discrete-channel reel tapes, and a collective shrug by the buying public.

That story is mostly true, though the format thrived for a while in Japan and Germany, and it never fully died. Now, modern tech has made possible rereleases of 1970s quad albums on relatively common formats: multichannel SACD and Blu-ray discs (BD). No more "meh" LP formats, no more fussy 1970s-tech decoders.

With a few hardcore adherents in the worlds of professional recording and music labels, the quad fire was never fully extinguished. Very early drafts of the "Red Book" Compact Disc standard included provisions for four audio channels; in fact, there were fringe efforts to revive quad on CD. A few companies released 2-channel discs with the audio matrix-encoded in either Dolby Surround (which could be run through a Dolby Pro Logic decoder common in home theater systems of the time) or DTS. Mobile Fidelity issued a few notable DTS-encoded CDs including Wings' *Band on the Run* and *Venus & Mars*.[1]

In the early days of multichannel SACD, a few old quad mixes from the 1970s were dusted off and repurposed, but the industry's emphasis was always on 5.1 surround sound. Many albums once issued in quad were remixed from the multitrack session tapes to the more modern format, with a bias toward "round stereo" instead of sounds popping up from behind or flying over or behind the listener's head, gimmicks typical of those free and wild '70s quad mixes.

Finally, quad re-emerged from the shadows, ready for the post-CD world. In 2009, Rhino Records launched its Quadio series with two limited-edition DVD discs with DTS 4-channel audio: *Chicago Transit Authority* and *The Best of Aretha Franklin*. They sold out quickly. That success made Steve Woolard, Rhino's head of A&R, more ambitious. Next up was a box set, on BD with hi-def, non-lossy 4-channel audio, of Chicago's entire quad catalog, followed by a box of the Doobie Brothers' four quad albums. Then, last year, Rhino launched an ongoing series of single-BD Quadio releases.

Meanwhile, in England, Dutton Vocalion owner Michael Dutton licensed quad content from Sony, current owner of Columbia and RCA recordings, and has released a steady stream of dual-layer SACDs (the master stereo mix on the CD layer). Columbia, by far, offered the largest quad LP catalog back in the day, yet their SQ matrix-encoded format was least likely to throw convincing surround sound on a home system. The Dutton SACDs are the first time most of these albums can be heard in satisfying 4-channel surround.[2]

In an interview, Rhino's Woolard said he's been a quad fan since the 1970s: "Ever since I first heard a quadraphonic demo, I was a fan. ... It's a different presentation that gives you a new perspective, uncovering bits that were either previously buried or not present in the stereo mix."

Dutton is also an OG quad fan: "I had the first EMI SQ quad decoder amp and speaker system. I had a lot of the old EMI/Capitol quads and some of the CBS ones. ... I've re-issued some of what I had back then."

Both said the quad market is niche but viable. Rhino plans four new titles each quarter this year; January releases were titles by Gil Evans, Randy Newman, Gordon Lightfoot, and War. Coming in May, albums by Seals & Crofts, Roberta Flack, Donny Hathaway, and Hot Tuna. Dutton's recent reissues include Henry Mancini albums originally on RCA plus Enoch Light Phase 4 titles and several Philadelphia International R&B hits.

In Japan, Sony has released some quad titles on SACD, in 7" LP-style sleeves with original cover art and insert materials including reproductions of old Sony quadraphonic equipment ads from the '70s and

1 See tinyurl.com/CD-Quad for a history of multichannel CD releases.

2 Here is a listing of Dutton's SACD offerings, many reissues of Quad albums: tinyurl.com/DuttonSACD; note the sorting options to the right.

PLATINUM 8

The best. For real.

And we can prove it with the most effective listening tests in the audio industry. Even though our previous series received worldwide acclaim, these cables surpass them in providing the most lifelike reproduction available, regardless of cost.

PLATINUM ECLIPSE 8
SPEAKER & INTERCONNECT

PLATINUM STARLIGHT 8
USB, DIGITAL AUDIO & ETHERNET

PLATINUM STARLIGHT 48 HDMI

PLATINUM ELECTRA POWER CONDITIONING CORD

"...voice at a level of purity previously unheard, utterly uncolored yet fully characteristic..."

ANDREW QUINT
The Absolute Sound, August 2023

"...Platinum Starlight 8 Ethernet recreates the most transparent, resolving, detailed, natural, and immersive performance..."

KERMIT HEARTSONG
Audio Key Reviews, July 2023

a David Salz innovation

© 2024 Wireworld, Inc.

Other cables filter your music.
Wireworld cables let the most music through.

Technology that channels musical expression.

www.wireworldcable.com

WIREWORLD®
CABLE TECHNOLOGY
Engineered for Reality™

booklets containing original liner notes and historical essays.

To be a quad fan, you have to like the music of the early to mid-1970s. By about 1977, the major labels abandoned quad, although it lived on in Japan until the early 1980s.

My quad interests date from my older brother's circa-1974 Technics 4-channel receiver and his small pile of matrix-encoded LPs. Many years later, I was loaned a collection of 4-channel reel-to-reel tapes and finally understood the format's potential. Then SACD and DVD surround sound came along. Several years ago, I acquired a near-mint top-line Sansui quad receiver from 1976, with onboard decoding of all the LP formats (SQ and Sansui's own QS matrix formats plus JVC's CD-4 discrete-channel system). Soon afterward, I was given a large collection of quad vinyl.

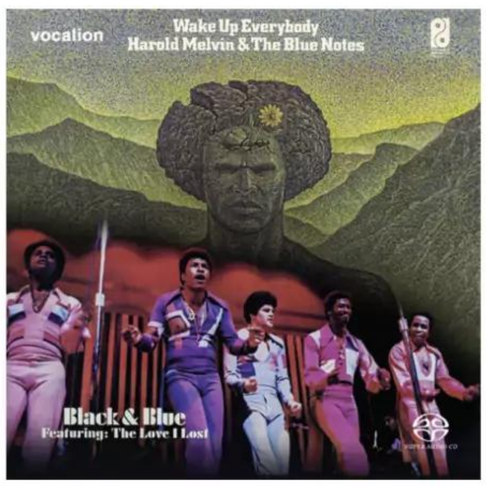
Although it's fun to play with the vintage platters and hear the quad sounds of the 1970s, the problems with the formats are obvious. SQ and QS matrix-encoded records, especially as played through original decoders, have inadequate channel separation and tend to fold down to "big mono" when the music is complex and loud. This is especially true with symphonic music. CD-4 discrete-channel records require a special cartridge—the Shibata stylus was invented for this—and the grooves can get worn down, so the high-frequency FM carrier drops out and the rear speakers go silent (although in my experience, playing a medium-sized pile of CD-4 records with a vintage Audio-Technica cartridge made for that format, the records can be pretty beat up and still produce consistent quad sound). If you own a pile of old matrix-encoded (SQ and QS) quad records and don't want to mess with 50-year-old hi-fi gear, consider the Surround Master V3 from Involve Audio.[3]

But if you're in it strictly for the music, there's no contest: The new, shiny disc reissues far outshine the old LPs. Assuming the four-track master tape is still available and in good shape, these new reissues will sound as the artists intended.

A listening tip: If you don't use four full-range/full-sized speakers and your system allows you to direct the bottom two octaves to a subwoofer, do it. In contrast to the quad LP formats, the low bass shines with well-recorded discrete-channel quad HD.

Here's a list of my favorite quad reissues so far, all still available as of March 2024:

BLACK SABBATH, *Paranoid* (Rhino BA2 3104 BD). An old favorite, the seminal heavy metal album[4] sounds fresh, different, and even more menacing with distinct four-channel mixes.



SANTANA, *Abraxas* (Sony Japan SICP 10135 SACD). The quad mix for this classic rock album is quite different from the familiar stereo. Carlos Santana's blistering guitar solo on "Black Magic Woman/Gypsy Queen" flies around the four speakers, suggesting a voodoo caldron of sound.

BARTOK'S *Concerto for Orchestra* by Pierre Boulez and the NY Philharmonic (Dutton CDLX 7360 SACD). For this SQ quad flagship release, Columbia producer Thomas Z. Shepard presented the orchestra surrounding the listener, with the strings and some percussion in front and the brass, woodwinds, and remaining percussion to the sides and rear. It offers a new perspective on the composition, with each note distinct. The original LP did not provide separation or clarity anywhere near what the 4-channel SACD achieves. Sony's reissue of this album from the early days of SACD was remixed into pedestrian "wide stereo" with rear reverb.

RAVEL'S *Daphnis et Chloé* and **STRAVINSKY'S** *Song of the Nightingale* by Pierre Boulez and the NY Philharmonic (Dutton CDLX 7381 SACD). *Daphnis* won a Grammy, and the many-microphones recording session was detailed in *Recording Engineer/Producer* magazine.[5] In quad, you will hear every detail of Ravel's score, expertly played by the NYPO. However, the real gem on this disc is Dutton's new quad mix of the Stravinsky ballet, created from the first-generation multitrack session tapes. Performance and sound are brilliant.

GIL EVANS, *Svengali* (Rhino BA2 1643 BD). Not on my radar previously, the Quadio edition quickly became a favorite. Evans and an all-star jazz ensemble recorded this at Trinity Church, NYC. The room sound is all around, below, and over the listener.

TOMITA, *Firebird* (Dutton CDSML 8558 SACD). This was an electronic-music sensation back in the day, Stravinsky rendered by Moog and magnetic tape. On RCA's CD-4 discrete-channel LP, it was impressive. On discrete-channel SACD, it is mind-blowing and damn fun.

MILES DAVIS, *Bitches Brew* (Sony Japan SICJ-10008-9 SACD). Quad mixes cooked up by producer Teo Macero and Columbia engineers Stan Tonkel and Ray Moore make this groundbreaking sharp turn for jazz music sound all the more trippy and different. The 4-channel version makes all the clearer how far out there the album was. Sony's lavish packaging is as outstanding as the remastered sound.

J. GEILS BAND, *Nightmares* (Rhino BA2 18107 BD). A hardcore funk explosion, from a band of white dudes from Boston. The gritty, muddy sound screams NYC early 1970s. It's cleaned up a bit with the benefit of four channels, and the intensity is undiminished.

WAR, *The World Is a Ghetto* (Rhino BA2 726002 BD). *Billboard* said it was the best-selling album of 1973. Many of us know "The Cisco Kid," but there is a lot more to this album, a mash-up of funk, jazz, blues, and some psychedelia. The quad mixes enhance its heaviness and trippiness.

CHET ATKINS, *Superpickers* (Dutton CDLK 4610 SACD). Atkins, a King of Nashville, gathered the best of the studio cats for some picking; blazing country music ensued. RCA's quad mix spreads the players out so that everyone's part is clearly delineated. With that bright a spotlight, in that esteemed company, there's no room for error. The Nashville Cats don't disappoint.

ORIGINAL CAST RECORDING, *Company* (Dalton CDLK 4638 SACD). Cuts from this SQ LP were featured in most Columbia demo LPs back in the day. The recording, made at Columbia's 30th Street Studio, is lush and detailed. Producer Thomas Z. Shepard's creative use of quad sound benefits the performers and musicians and is in keeping with the musical's themes and drama. The recording session was captured in a documentary by D. A. Pennebaker.[6] ■

3 See tinyurl.com/4594uzwh.

4 See tinyurl.com/2dxsfutk.

5 See p.41 of the pdf at tinyurl.com/ynddatch.

6 See youtu.be/FDlO4fZC6Tg.

HEGEL
MUSIC SYSTEMS

Find your local dealer at ***hegel.com***

AURAL ROBERT

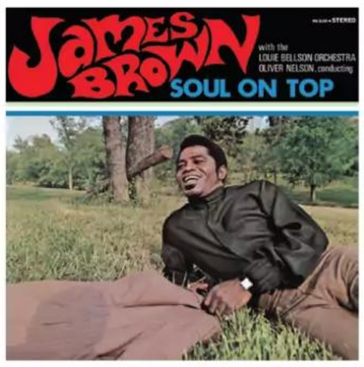
BY ROBERT BAIRD

THIS ISSUE: The legendary jazz label Verve and Jack White's Third Man pressing plant collaborate on a reissue series for jazz, broadly defined.

A Verve–Third Man collaboration

So, former White Stripe and Third Man label founder Jack White has now moved into jazz? It was a question that intrigued me when I first heard about the partnership between Universal Music and White's Third Man Records, a vinyl reissue series called Verve By Request. Was Universal just a client for Third Man's relatively new LP pressing plant in Detroit, or was this a genuine collaboration? And what the hell does Jack White know about jazz?

"When you look at the breadth and the scope of the releases that Universal were gonna put out, it ran the gamut and was not strictly a jazz reissue project," Third Man's Roe Peterhans told me in a recent interview, when I asked about this unexpected morphing of Third Man into a jazz-reissue label. While Third Man eschews company titles, Peterhans functions as the operations director at the Detroit location and is also a graphic designer. "There's pre–avant-garde jazz and some really interesting psychedelic music. And James Brown doing some really funky stuff and soul (*Soul on Top*). We found nice parallels to the rock'n'roll, punk, and garage stuff that we've been known for since our early years.



"And the releases from Alice Coltrane, Dorothy Ashby, and Lloyd Brooks, they are all Detroiters. Ashby and Coltrane even have storied connections to Cass Technical High School, Jack's alma mater, which is, like, three blocks from our location, so there's all these connection points beyond just the music."

"Early years" is the key part of that response. Today, Third Man is wisely interested not only in having clients for its pressing plant but also in spreading its wings as a music company. For Universal, which has other vinyl reissue series, having a quality pressing plant to depend on came with the added cool of working alongside an innovative force in music today that also attracts a younger consumer.

"When Universal came to us to press this series, we asked them, 'What if Third Man partnered with you on the idea of breaking away a small amount of each of these runs to do a very limited edition, sort of an artful piece?'" Peterhans says. "We'd use Third Man color schemes and take the artwork from the original albums and rethink it to become simplified black, yellow, and white silk-screened custom jackets. They were immediately on board and loved the idea."

The Verve By Request reissue series started in the early aughts, on CD. At Universal, it is managed by Ken Druker, SVP, Jazz Development, Verve Label Group, who started his career at Verve Canada in 1995 before moving to New York City in 2000. In collaboration with Third Man, he chooses titles for the series; he says those choices can be influenced by requests from inside and outside the company. Druker says three-quarters of the Verve By Request vinyl reissues are cut from tape sources, the rest from digital files.

"I wanted to do a wider range of music, style-wise, and at a more affordable price point," Druker told me in a recent telephone conversation. "And also, we needed a place for releases where we didn't always have analog sources in good shape, which is what we needed for the ... series we do with Chad Kassem at Analogue Productions."

Intriguingly, there are titles in this series that are being reissued in the US on vinyl for the first time since their original release—a minor miracle considering how much has been reissued in the last decade. The series started off in 2022 with a reissue of the Roy Brooks album, *Beat*, which was originally on Motown subsidiary Workshop Jazz and which had never seen a vinyl reissue. 2023's first-time vinyl reissues included Eartha Kitt's *Bad but Beautiful* and Max Roach's *Moon Faced and Starry Eyed*. In 2024, *The Third Cup* by The Eddie Fisher Quintet, Chet Baker's *Blood, Chet and Tears*, and Jack Kerouac's *Readings by Jack Kerouac on the Beat Generation* will all see first-time LP reissues.

The Third Man pressing plant opened in 2017 behind the label's office and retail store. It began with eight new presses from Newbilt, a German company that reverse-engineered a book-mold hinged, clamshell-like press. After also using Pheenix Alpha presses for a time, the Third Man plant has become a shop using only two kinds of presses. They now have 16 presses available—eight Newbilt and now eight new VIRYL presses, which are built in Toronto, Canada.

"We use [the VIRYL presses] mostly for doing unique, custom, multicolor pressings because they perform better," Peterhans explains. "We can get our hands in there and be artists with those. And because we were one of the first to use those presses, our in-plant engineers have been able to reinvent some of the pieces and parts to make them run even better. So, we're also a bit of an R&D team, so to speak, thanks to having spent so much time with these newer presses. In a way, we've kind of become the pressing plant showroom for all new equipment in the world."

Asked to estimate the lifespan of the Verve By Request project, Druker chuckles, "When it runs out of titles to reissue. Seriously, never. Think about the catalogs we currently control. It's all of Verve, all of Impulse. Mercury. A&M, Argo and Cadet, ABC Paramount, Decca—there are literally thousands of titles."

And what's White's verdict on the project?

"He's enamored with it," Peterhans says. "He's thrilled." ■

David Lewis Audio.com

THE FINEST IN HIGH END AUDIO

THE FINEST PHONO CARTRIDGES FOR THE FINEST TURNTABLES

AIR TIGHT

BENZ MICRO

CHARISMA

ETSURO URUSHI

KOETSU

MY SONIC LABS

215-725-4080 davidlewisaudio@gmail.com

ACCUPHASE	AVM	CLARUS	KIMBER KABLE
AERIAL	AYRE	DAN D'AGOSTINO	KOETSU
AESTHETIX	BACKERT LABS	DCS	NOLA
AIR TIGHT	BALANCED AUDIO	ESOTERIC	NORDOST
ALLUXITY	BENZ MICRO	ESTELON	PMC
ALTA AUDIO	BOULDER	ETSURO URUSHI	PROAC
AMG	CANTON	FRANCO SERBLIN	SME
ATOLL	CHARISMA	JEFF ROWLAND	SUTHERLAND
AUDIO PHYSIC	CHARIO	JOSEPH	VIVID

REVINYLIZATION

BY ROBERT BAIRD

THIS ISSUE: When the Phantom went electric.

Joe Henderson's *Power to the People*

In the late 1960s and the early years of the next decade, tenor saxophonist Joe Henderson, like many of his contemporaries, was listening to such albums as Miles Davis's *Filles de Kilimanjaro* and *Miles in the Sky* and pondering what it meant for his music. During this period, for better or worse, the rhythms and aggressive approach of rock music, including the use of electric rather than acoustic instruments, were mixing with jazz and giving birth to fusion. In hindsight, it seems inevitable that these two vital genres, both of which prize improvisation—be it on electric guitar or tenor saxophone—should become each other's major influence. Jazz fusion based in jazz (Mahavishnu Orchestra, Tony Williams Lifetime, Return to Forever), and jazz rock based in rock (Chicago, Blood Sweat & Tears, Soft Machine), evolved into major genres in the 1970s. From these tendrils, jazz pop, jazz funk, M-Base, and even smooth jazz have continued to spread.

Henderson began his musical journey as a teenager in Detroit in the 1950s. A devotee of Lester Young and Charlie Parker, he recorded extensively for Blue Note in the 1960s, both as sideman and as leader. By the late 1960s, he'd switched to Milestone Records and was working with producer Orrin Keepnews, branching out, exploring fusion and funk in his music. His music was also giving expression to his growing desire to press social and political issues, many connected to the civil rights movement.

With its activist title, 1969's *Power to the People*, one of the most eagerly sought-after and prohibitively expensive original pressings in the Henderson vinyl catalog, has now been reissued as part of Craft Records' Jazz Dispensary Top Shelf Jazz Series. With lacquers cut by Kevin Gray at Coherent Audio, this 180gm reissue, pressed at Record Technology Incorporated (RTI) in Camarillo, California, is a welcome and long-overdue return of one of Henderson's most vital albums. Replicating the strengths of the original mix, this reissue has great presence and punch, adhering to the strict separation of the original with the drums in the right channel and the keyboards in the left.

Power to the People was recorded at Plaza Sound Studios on West 50th Street in New York City. A former rehearsal space for Arturo Toscanini's orchestra, this now-defunct studio was located in the same building as Radio City Music Hall. Over the years, it hosted recording sessions by musicians from Bill Evans and Sonny Rollins to Debbie Harry and Ace Frehley. George Sawtelle was the audio engineer on the original sessions.

Musically, *Power to the People* shows both where Henderson had been as a player up to that time and, even more, what he and his music were evolving toward. The most obvious musical change is the appearance of electric instruments. The strength of the rhythm section alone makes *Power to the People* an unassailable classic. Ron Carter, repeatedly switching from acoustic standup to electric bass, is joined by the inventive and muscular playing of drummer Jack DeJohnette. Also, switching between acoustic piano and the unmistakable candied sound of the Fender Rhodes is Herbie Hancock. Finally, trumpeter Mike Lawrence adds his horn to a pair of tracks, the title number and "Afro-Centric."

The album opens with "Black Narcissus," one of Henderson's most famous tunes and one that would become the title track of a 1977 Henderson album. Here it's a beautiful ballad, showcasing Henderson's sensitivity and incisive ideas, reflected and refracted by Hancock's alternately forceful and delicate accompaniment on the Rhodes. This leads into "Afro-Centric," one of the trilogy of tracks, beginning with "Black Narcissus," now renowned as this album's masterpieces. With the unmistakable sound of Henderson dipping his toe into fusion, "Afro-Centric" features Hancock setting the pace on the Rhodes and a no-less-game Henderson venturing down many fruitful improvisatory lanes with modes ranging from honking to rolling. Hancock's midtune solo is a triumph. Lawrence's fluid trumpet is also a spur to the driving momentum of this fast, jam-inspired composition. Its fade ending has always seemed an odd choice but one that again points to the influence of rock-music production. That's followed incongruously by the slow, rich, warm-toned ballad "Opus One-Point-Five," a step back into Henderson's artful but familiar past.

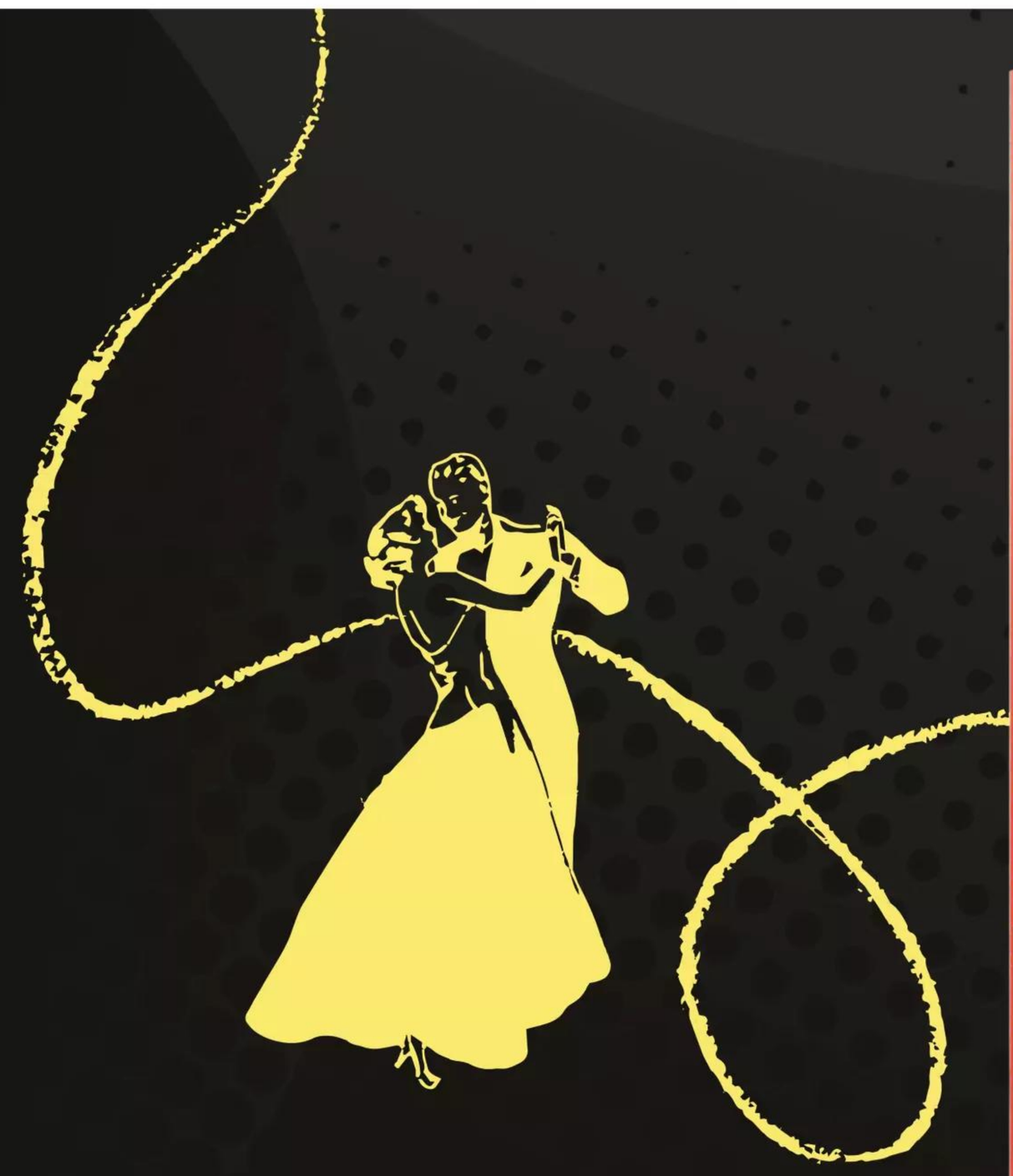
As the last of the album's three fusion-influenced tracks, the title track opens with Lawrence and Henderson doubling parts before veering off into funky, inventive solos. In his first solo of this nearly nine-minute track, Henderson confidently pushes himself into hoarse skronking. Lawrence flutters and DeJohnette pulls out all the stops before Hancock outdoes himself with a ferocious Rhodes solo. True to the overarching rhythm of this album, any raw feelings stirred up by the title track are quickly assuaged by a gentle and relaxed "Lazy Afternoon," a tune Henderson recorded in 1965 with Pete La Roca on the drummer's *Basra* album. The finale, "Foresight and Afterthought," an energetic free-jazz explosion of bass, drums, and saxophone, hints at yet another trend in jazz that Henderson was exploring.

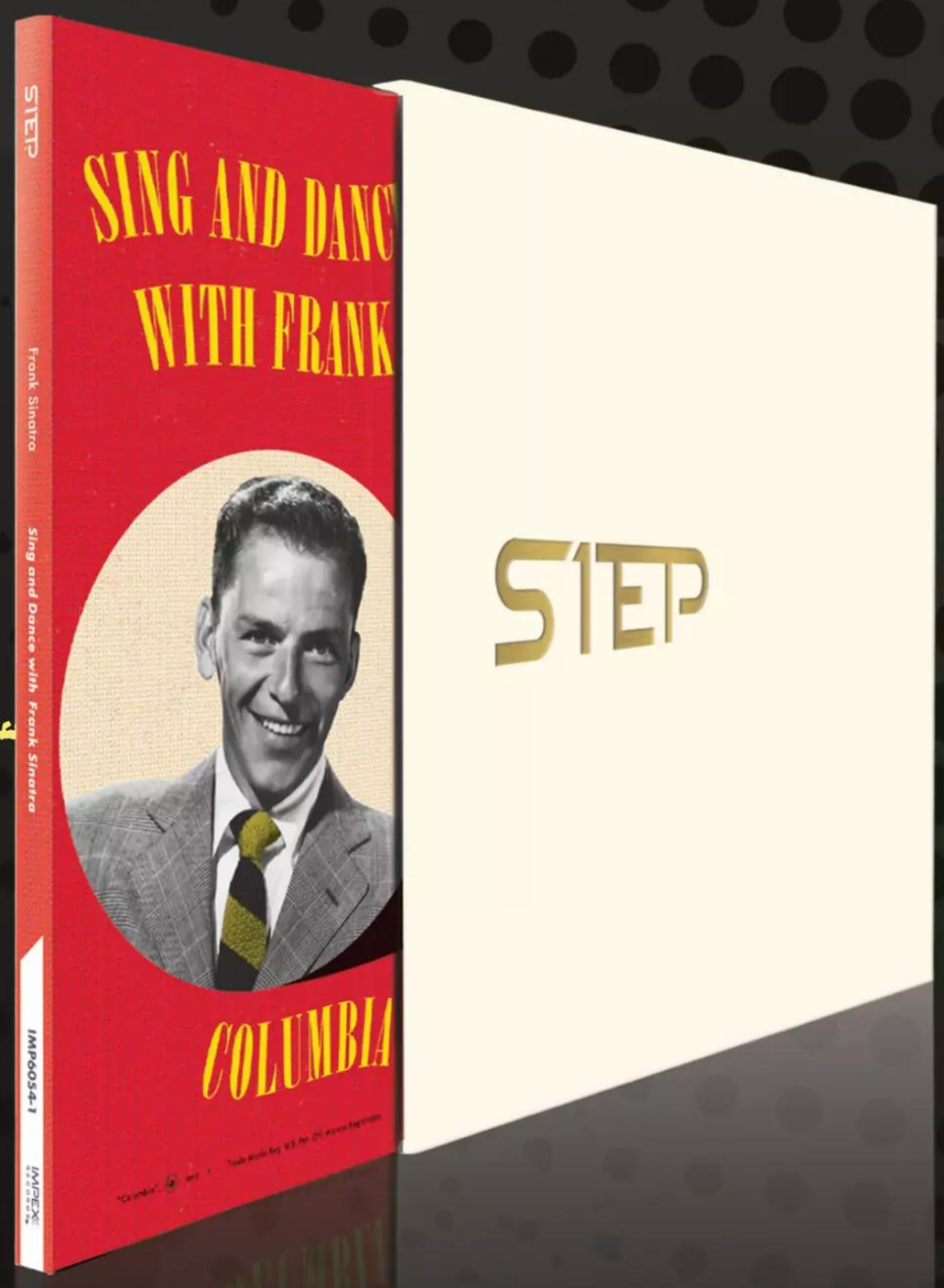
While some feel that *Power to the People* is where Henderson's music unfortunately strayed into fusion, abandoning the true flame of bebop to be tainted by rock and funk, these seven tracks, finally available again on a quality vinyl pressing, remain a tantalizing first step into the next essential period in his career. That direction would continue in such fusion/soul jazz–influenced albums as *In Pursuit of Blackness* (1971), *Black Is the Color* (1972), *Multiple* (1973), *Canyon Lady* (1975), and *Black Narcissus* (1977). Increasingly among jazz's younger aficionados, these visionary years of Henderson's recording life are now thought of as being the most influential in his far-reaching career. ■

IMPEX RECORDS™ | 1STEP™

Call Today! 866-615-0399 or visit us online at **elusivedisc.com**

elusive DISC





- AAA mastered by Chris Bellman and Andreas Meyer from the original sources
- Produced and annotated by Sinatra expert Charles L. Granata
- Pressed using RTI's one-step process on VR-900 Supreme Vinyl for optimal detail, frequency response and deep black backgrounds
- Deluxe slipcase and Stoughton Printing M-Pak jacket with film laminate gloss and UV spot gloss throughout
- Tipped-in 36-page expanded booklet with unique graphics and photos, additional production and personal historical information, mastering notes, and graphics
- Contains all the AAA bonus tracks from the 33-rpm and SACD versions, plus two more AAA tracks ("It's Only a Paper Moon," "American Beauty Rose [Orchestra Version]" *and* a longer production audio take of "It All Depends on You")

STRICTLY LIMITED TO 5,000 1STEPS

Fax: 765-608-5341 Info: 765-608-5340 2439 E 67th St., Anderson, IN 46013 sales@elusivedisc.com M-F: 9-6 EST

RECORD REVIEWS

EDITOR'S PICK

RECORDING OF THE MONTH

BENJAMIN BRITTEN
Violin Concerto • Chamber Works

Isabelle Faust, violin; Symphonieorchester des Bayerischen Rundfunks, Jakub Hrůša, cond.; Boris Faust, viola; Alexander Melnikov, piano

Harmonia Mundi HMM902668 (CD, reviewed as 24/96). 2024. Sebastian Braun, Julian Schwenker, prods.; Schwenker, Klemens Kamp, engs.

PERFORMANCE ★★★★★
SONICS ★★★★½

I sat mesmerized when I first encountered a recording of Benjamin Britten's early Violin Concerto from 1939 (revised in 1958) at an audio show exhibit sponsored by High End by Oz. Ever since I heard those portions of Linus Roth's superbly recorded SACD for Channel Classics, I've longed for a version that would move beyond its strange harmonies and dissonances to reveal all facets of this communicative yet enigmatic work. Isabelle Faust rarely shies away from music conducive to deep thought and feeling; recently she has recorded works by Berg, Schoenberg, Bartók, and Stravinsky. Her hair-raising, emotionally wrought rendition of the Britten concerto, with Jakub Hrůša conducting the Bavarian Radio Symphony Orchestra for Harmonia Mundi, reveals depths and nuances that competing versions only hint at.

Britten was 25 when, in late 1938, he began composing the concerto for Spanish-born English violinist Antonio Brosa. By the time Britten completed the orchestration, in 1939, the lifelong pacifist had fled war-torn Europe for the United States with his life partner, tenor Peter Pears.

In this live recording, Faust's bright-toned violin is given front-and-center precedence. Lines pulsate with feeling. Her high-flying excursions that include playing on the bridge are gorgeous. The musicianship is so ravishing that, after multiple listens, I still sit in astonishment at Faust's achievement.

After a seductive and dancelike Spanish lilt surfaces in the first movement, an ominous darkness in the orchestra impinges on the violin's rhapsodic lyricism. The second movement begins energetically, even optimistically, before Faust's violin begins to dance and whirl frantically and fiendishly. Vibrato all but ceases as orchestral storm clouds gather. There's a marvelous, unforgettable short section where the violin seems to chirp at the top of its range while, many octaves below, a tuba lays a dark foundation. During the violin's solo cadenza, the magnificent Faust growls with anger in her Strad's low register and sears at the top. At times, her laments and wails seem to echo the suffering of countless parents embracing the bodies of dead children and other loved ones. The music is heart-rending.

As tension builds to the breaking point, the orchestra re-enters, filled with grief. The music almost grinds to a halt, and everything seems in danger of crashing down. As the first movement's Spanish theme reasserts itself with adamance, as if singing valiantly amidst forces stronger than itself, brief hints of hope and healing emerge. On my third listen, thoughts of Spain's Abraham Lincoln Brigade fighting Franco's fascism flooded my mind.

After a big orchestral buildup to a false climax, Faust's instrument cries out repeatedly with the eloquence of a human voice. In her hands, the intensity of the concerto's final five minutes is breathtaking. Britten's conclusion threatens to go on a bit too long, but Faust finds its poetic center and makes its plea her own. What a performance!

Shortly before Harmonia Mundi released Faust and Hrůša's recording, the UK's *Gramophone* magazine awarded an Editor's Choice to a considerably mellower recording of the Violin Concerto, on Orfeo, by Baiba Skride and the ORF Vienna Radio Symphony Orchestra under Marin Alsop. Skride's playing—far less aggressive, intense, and bright—is most notable when she slows and tapers her slenderer sound to a mere thread. The engineering gives Alsop's orchestra far more prominence—the balance is more authentic—and there is considerably more emphasis on lower midrange weight and hall ambiance. If you're drawn to Skride and Alsop's interpretation and/or the recording's sonic perspective, you may likely give precedence to the music's personal implications over its war-torn relevance. Both reactions are, of course, valid. For me, Faust's brilliance, stamina, and conviction speak strongest.

The Faust recording's three companion chamber works all date from early in Britten's career, including *Two Pieces for violin, viola, and piano* completed shortly after his 16th birthday and first recorded only a decade ago by Matthew Jones and Annabel Thwaite on Naxos. Here, Faust joins her frequent, sympatico recital partner, the equally brilliant Alexander Melnikov, and Boris, her violist brother. It's a most attractive composition, but you'll search hard to discover the emphasis on decadence and decay that informs a lot of Britten's mature work, especially the works composed for Pears. (The two pieces, after all, are called "The Moon" and "Going Downhill on a Bicycle.")

The other two chamber works are marginally more substantial. Britten called *Reveille* a "concert study"; also written for Brosa and said to be about the violinist's difficulty with early mornings, it moves from plaintive whining to humor. The *Suite for Violin and Piano* has lovely moments, but it's the Violin Concerto, which points to the greatness of Britten's most searing operas and most transgressive and defiant settings of poetry by Auden, Donne, Michelangelo, and others, that will inspire you to play this recording over and over again. Urgently recommended.—**Jason Victor Serinus** ■

MoFi

Andrew Jones' Latest Masterpiece: Modern Design, Classic Aesthetics

NEW MoFi
SourcePoint 10
Bookshelf Speakers

KEF
LS50 Meta Bookshelf Speakers

Shunyata
Eiger Power Conditioner

NEW Bowers & Wilkins
805 D4 Bookshelf Speakers

NEW HiFi Rose
RS520 Streamer/Amplifier

Luxman
L-507Z Integrated Amplifier

musicdirect®

312-433-0200

CHECK OUT OUR NEW CATALOG!

Call for a free copy

CLASSICAL

TAKÁCS ASSAD LABRO
Pieces for bandoneón, string quartet, piano, and voice

Takács String Quartet, Clarice Assad (piano and voice), Julien Labro (bandoneón)

YAR59691 (24/88.2 download). 2024. Bob Attiyeh, J and Helen Schlicting, prods.; Bob Attiyeh, eng.

PERFORMANCE ★★★★½
SONICS ★★★★★

Yarlung's latest "audiophile" recording is a breath of fresh air in every respect. Offering seven accessible, beguilingly fresh works, all composed within the last 53 years (and several quite new), it brings together stellar artistic forces: the 49-year-old Takács String Quartet; composer/pianist/vocalist Clarice Assad; and bandoneón/accordion virtuoso Julien Labro. If you're intrigued by the thought of such a combination of artists performing music that harks back to Piazzolla and classic Brazilian jazz, and also forward, then this is a must listen: You will rarely hear these artists recorded with this much color saturation, warmth, transparency, and immediacy.

The program starts with Assad's *Clash*, an exciting, sometimes dissonant work, complete with distant sound effects, which she wrote for the Takács and Labro to tour all over the world, followed by Labro's mellow, warm, reflective *Meditation No. 1*, whose mild touch of heartbreak harks back to Piazzolla. The third work is Bryce Dessner's nouveau-minimalist, forward-driving *Circles*. To these Assad (who constructed the program) added Milton Nascimento's classic Brazilian jazz tune *Cravo e Canela*, offering her own unique blend of Brazilian scat and Indian vocalization. Next up: Assad's own endearing three-movement *Constellations* followed by the late Kaija Saariaho's marvelous *Nocturne*, a short, magical journey into the unknown, dedicated to Witold Lutoslawski.

Takács Assad Labro merges elements of classical, jazz, and contemporary music as it blends distinct musical cultures. Designed to delight, it is less likely to knock your socks off than inspire you to take them off as you sit back, absorb, and smile. Highly recommended.—**Jason Victor Serinus**

SMETANA
Má vlast

Czech Philharmonic/Semyon Bychkov

Pentatone PTC 5187203 (Hi-res WAV download). 2024. Holger Urbach, prod.; Stephan Reh, eng.

PERFORMANCE ★★★★½
SONICS ★★★★½

Smetana's cycle of six tone poems is a Czech cultural touchstone, regularly performed at festivals and events. Bychkov, a foreigner in Prague, nods to Czech tradition while providing his own insights, especially in *Vyšehrad* and *The Moldau*. The harp arpeggios launch *Vyšehrad* spaciously, the winds and then the upper strings move the theme smoothly, and the little fanfare interjections are ominous rather than festive. A turbulent development tautly builds to a no-nonsense climax. After some odd rubatos from the flutes, the river Moldau flows swiftly; focused accents render the theme starkly dramatic rather than leisurely. The folk-dance rhythms are nicely marked; the transition back to the principal theme, while seamless, scans oddly.

The remainder is less revelatory but graced with effective touches. In a conventional *Šárka*, Bychkov shapes the turbulent opening with rhetorical rubatos, and the clarinet obbligato over the march registers as a broad, arching melody. Bychkov can't quite mitigate the busy scoring of *From Bohemia's Woods and Fields*, but the opening is imposing, and the fugal episode elides smoothly into the affirmative anthem.

The crisply articulate *Tábor* offers fervent wind chorales and, against the chugging triplets, a clear, lively interplay of motifs. An unmarked ritard and fade helps keep the transition into *Blaník* from sounding redundant. The lyric episode before the triumphant reprise is unusually tender and poignant, and the coda is the best balanced since Kubelik's monaural Mercury recording. (I am not joking.)

The orchestra plays with polished style, though the strings "speak" slightly later than the winds on a few attacks. The wide, vivid soundstage offers satisfying depth in the brass-choir climaxes of the final two movements, and, over headphones, a few stray noises.—**Stephen Francis Vasta**

TCHAIKOVSKY, KORNGOLD
Souvenir de Florence, String Sextet

The Nash Ensemble

Hyperion CDA68406 (CD). 2024. Andrew Keener, prod.; Oscar Torres, eng.

PERFORMANCE ★★★★½
SONICS ★★★★½

If you know the classic Borodin Quartet (and friends) *Souvenir de Florence*, the opening here may disappoint. The Nashes, though vigorous and propulsive, sound thin by comparison, and in the second group, the buoyant violin gets a finicky accompaniment. But by the development, the players banish the Borodins' shade, leaning into the broad, *tenuto* lines and committing to the music's ardor, even if the elaborate coda wants to run away.

There's no problem with the saturated tone of the *Adagio cantabile*, though it's more nearly *andante*; after the agitated central section, the recap's faster pizzicatos don't faze the players. The *Allegretto*'s melancholy, authentically folklike contours artfully combine with the chipper "B" theme in the return. Another folk-inflected theme launches the finale; the second group's accompaniment seems deliberately held down—the Borodins underlined its obsessiveness—but the recap is open-hearted.

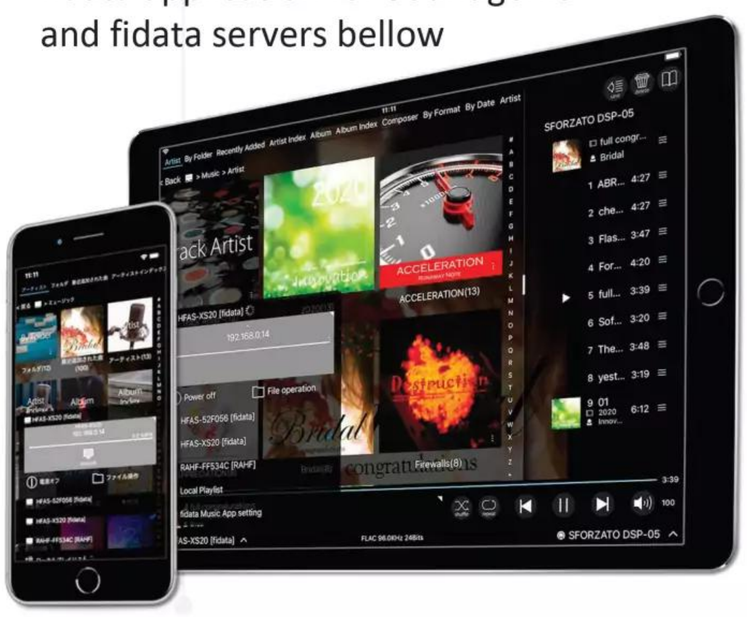
With Korngold, you never know whether you'll get Hollywood's lush Romantic or a chilly modernist. In the Sextet, he's both. The angular fragments that begin the first movement coalesce into a bed of plush homophony; the second group is spacious, horizontally and vertically. Light, open textures make the music seem "modern," with some (Richard) Straussian pivots.

Stabbing accents yield to an unsettled, vaguely Expressionist *Adagio*; Korngold works through the twists and turns, and the 10-minute movement holds together well. In place of a scherzo, a wandering *Intermezzo* turns into a *Ländler*, becoming a slower waltz in the trio with an abrupt, heartfelt outpouring in the home stretch. The *Finale* offers a cheerful, vigorous start and a quirky second group, with bits of pure Weill in the development. The players are vigorous in the fast movements. The sonics are pleasing.—**Stephen Francis Vasta**

Soundgenic joins fidata - Introducing the I-O DATA DEVICE family of multi function servers and enhanced fidata music application!

I-O DATA DEVICE servers are 100% designed, engineered and manufactured in Japan. All servers allow for drag and drop/ plug and play from drives on your network. With an optional USB DVD/Blu-ray player (Not included) each device is a server/ ripper/tagger/renderer and CD player.

fidata application for Soundgenic and fidata servers bellow



Pro grade fidata Multi-SSD "X" Cluster Network Audio Server (Black)

The fidata "X-Cluster SSD system" feeds data uniformly across multiple SSDs. The resulting ability to access data within the clusters, smooths the load on the power supply by limiting deviations in power consumption. This technology results in greater noise reduction allowing extraction of more "hidden data" from within a file, providing a smoother, highly detailed and extremely dimensional soundstage.

fidata LAN Cable,
USB Cable

For detailed **use information on Soundgenic** please visit: **www.iodata.jp/ssp/soundgenic/en/**

For detailed **use information on fidata** please visit: **www.iodata.jp/fidata/en/**

Distributed in the USA by Source Systems, Ltd.. 949-369-7729 sourcesystems@cox.net www.sourcesystemsltd.com

Copyright © *I-O DATA DEVICE INC.*

JAZZ

JULIE KELLY
Freedom Jazz Dance

Kelly, vocals; Josh Nelson, piano, keyboard; Larry Koonse, guitar; five others

Laurelwood LW3088 (auditioned as CD). 2024. Josh Nelson, Barbara Brighton, prods.; Talley Sherwood, Harriet Tam, engs.

PERFORMANCE ★★★★½
SONICS ★★★★½

Talented jazz singers are never in short supply. The trick is to find one who moves you. Currently, two of the most acclaimed, Jazzmeia Horn and Samara Joy, possess extraordinary vocal instruments, but they sometimes seem more interested in displaying their chops than telling a story, much less breaking your heart.

Julie Kelly is none of the above. She is not new. She began performing in public in the 1970s. She is insufficiently acclaimed. She does not have a set of pipes that can blow the windows out of auditoriums. But she has the kind of voice you want to spend time with. It projects qualities that *are* in short supply, like personality and integrity.

You could enjoy such a voice singing any good song, but Kelly finds songs that sound meant for her. Sting's "Practical Arrangement" is a dry-eyed, unsentimental love song. "Sunday in New York," by Peter Nero and Carroll Coates, is one of the most joyful of the world's countless New York songs. Kelly's rejection of sentimentality makes her credible on the subject of joy.

Where Kelly truly shines is on relatively familiar material like Gordon Lightfoot's "Early Morning Rain." When you hear it interpreted by her lived-in, streetwise voice, you feel you finally understand the tune. Her mashup of Willie Nelson's "Funny How Time Slips Away" and Bill Withers's "Hello Like Before" deepens both by making them one story. The songs by Lightfoot and Nelson and Withers demonstrate that Kelly is an artist with range: She can portray joy, but she can also render complex feelings like sadness tempered by irony and resignation.

This album has two other virtues: elegant arrangements by Josh Nelson and crystalline sound by Talley Sherwood and Harriet Tam.—**Thomas Conrad**

RUFUS REID AND CAELAN CARDELLO
Rufus Reid Presents Caelan Cardello

Liam Records ARF-1 (180 Gram LP). 2023. Michael Fremer, Robin Wyatt, exec. prods.; Duke Markos, eng.

PERFORMANCE ★★★★½
SONICS ★★★★★

The jazz piano world is filled with contenders these days, and Caelan Cardello is a name to watch.

This relaxed set, a duo with veteran bassist Rufus Reid, was impeccably recorded at 24/96 resolution at the small venue inside New York City's Klavierhaus, a piano restoration specialist business. The recording is unadulterated; according to the liner notes, engineer Markos only did "a bit of EQ and image placement tweaks" to the original digital files, with input from the great Joe Harley, who ably helms Blue Note's Tone Poet series. The lacquers were cut by Matthew Lutthans at The Mastering Lab, and the LPs were pressed at QRP.

The recording has a vital presence and a warm, appealing sound thanks in part to the now-retired Bob Ludwig, who chose this as one of his final projects to master for vinyl.

Reid is steady throughout, leaving lots of room for Cardello. As a player, Cardello is still young, yet to fully form. He is at his best here in a version of Cedar Walton's "Bolivia," where an upbeat Brazilian rhythm spurs him to scamper across the keys, at one point dropping in a quote from "The Girl From Ipanema." Also lively is a reading of Benny Golson's "Stablemates."

So far, Cardello is a pleasant, nostalgic pianist well-versed in jazz history. His choices could be more imaginative. His ideas do not explore much new ground. But then he is just starting out. The complexity will come.

One obvious drawback to this session, for me at least, is the lack of a drummer, the presence of which would have changed the dynamic. Tempos are much the same throughout. Reid is not a driver here; he stays in the background, allowing the pacing to linger.

A promising start to be sure, this beautiful-sounding set hints at an intriguing future for a talented player.—**Robert Baird**

ONE FOR ALL
Big George

Eric Alexander, tenor & alto saxophones; Jim Rotondi, trumpet; Steve Davis, trombone; David Hazeltine, piano, Fender Rhodes; John Webber, bass; Joe Farnsworth, drums; George Coleman, guest tenor saxophone

Smoke Sessions SSR-2401 (WAV, available as CD). 2024. Paul Stache, Damon Smith, prods.; Owen Mulholland, eng.

PERFORMANCE ★★★★½
SONICS ★★★★½

Hard bop was born in the mid-1950s when bands like Art Blakey's Jazz Messengers began to play a bluesier, funkier version of bebop. It was more explicit melodically yet more open-ended.

Hard bop still cuts a large swath through the jazz landscape. In the right hands, it never gets stale, because it allows for, and in fact stimulates, creative elaboration and individual expression.

Hard bop has been in the right hands for 27 years with the band that calls itself One for All (after the title of Art Blakey's last recording). On *Big George*, their 17th album, they announce themselves with a raucous summons, "Chainsaw." The solos are on-point and on fire. The group's pianist, David Hazeltine, has called the front line of Jim Rotondi, Eric Alexander, and Steve Davis "the best horn section currently, and ... one of the best in history." That is extravagant praise, but when you hear how these three nail tune after tune and how they keep one-upping each other on solos, it is hard to disagree. When they slow down for a ballad, like "The Nearness of You," you can feel the raw power they've held in reserve.

Big George is an atypical One for All record. It has a special guest. Sax player George Coleman, 87 years old and a hard bop legend, sits in on three tracks. Coleman entered jazz history in 1964, when he played on one of the greatest live jazz recordings of all time, Miles Davis's *My Funny Valentine*. The highlight of *Big George* is "My Foolish Heart," where he spills his guts and bares his soul. He calls up the song from within himself, in short bursts of passion, across intervals from keening cries to deep rasps. George Coleman endures.—**Thomas Conrad**

THE $10K TUBE PHONOSTAGE FOR 1/3 THE PRICE

"WITHOUT A DOUBT, A SONIC MASTERPIECE!"

- DICK OLSHER, THE ABSOLUTE SOUND

EVO 100 TUBE PHONOSTAGE

• ALL-TUBE DUAL MONO DESIGN • NO FETs, NO CHIPS

• 5AR4 TUBE RECTIFICATION AND EL34 FILTRATION • POINT-TO-POINT WIRING

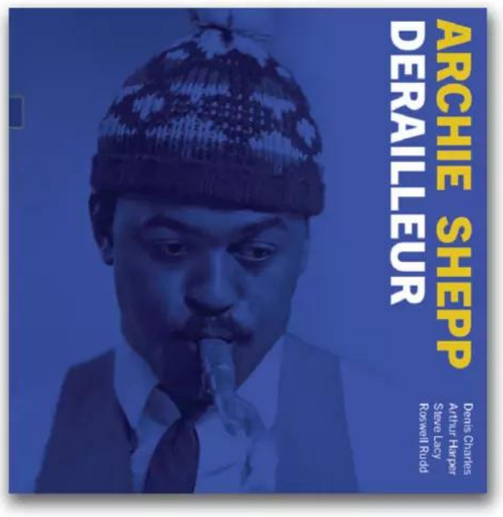
PrimaLuna®

LEARN MORE | PRIMALUNA-USA.COM

WATCH THE VIDEO!

DISTRIBUTED IN THE AMERICAS BY HARMONIA DISTRIBUTION | HARMONIADISTRIBUTION.COM

JAZZ



ARCHIE SHEPP
Derailleur

Archie Shepp (tenor saxophone), Roswell Rudd (trombone), Steve Lacy (soprano saxophone), Arthur Harper (bass), Denis Charles (drums)

Triple Point TPR 311 (LP). 2024. Joe Lizzi, Ben Young, prods.; Art Crist, Paul Gold, engs.

PERFORMANCE ★★★★½
SONICS ★★★★★

It is hard to imagine, if you were not there, a now-legendary artist scuffling for work. After they've achieved it, it always seems like they were destined for greatness. *Derailleur*, an early recording by Archie Shepp, certainly makes it seem that way.

In spring 1964, when these tracks were laid down in Bell Sound Studios by early Savoy/ESP-Disk engineer Art Crist, Shepp was hardly unknown; he had already spent a couple of years with Cecil Taylor, had a shared Savoy date with Bill Dixon, and played with the seminal avant-garde ensemble the New York Contemporary Five. But he did not have that elusive record deal, and Impulse head Bob Thiele was not returning his calls. Thanks to an assist from John Coltrane, by that summer, Shepp was making the first of many albums for Impulse!.

Heard here with Shepp are trombonist Roswell Rudd, soprano saxophonist Steve Lacy, drummer Denis Charles, and bassist Arthur Harper. The music includes two Shepp pieces not heard elsewhere and "Sophisticated Lady," the first of many times Shepp would record the Duke Ellington classic. Those tracks take up the A side; the flip is breakdowns and alternate takes. Included with the LP (mastered by Triple Point's Joe Lizzi and Ben Young, lacquer cut by Paul Gold) is an insert with a fascinating historical survey by Young, one of the premier historians in jazz.

This is a demo, not intended for public airing, but it is professionally recorded (in mono), and Shepp sounds fully formed as a player and as a composer, especially on his "Viva Jomo." Lacy's playing is revelatory; somehow he makes his soprano sound like a flute. Furthermore, this sounds like a working band, listening to each other and playing together.—**Andrey Henkin**

CHRIS POTTER
Eagle's Point

Potter, saxophones, bass clarinet; three others

Edition EDN1237 (24/96 WAV, available as CD, LP). 2024. Potter, prod.; John Davis, eng.

PERFORMANCE ★★★★★
SONICS ★★★★★

Chris Potter is one of the elite tenor saxophone players in jazz. He associates with the best people. But even for him, the personnel list on his new album pops off the page. How's this for a rhythm section: pianist Brad Mehldau, bassist John Patitucci, and drummer Brian Blade.

Supergroups, which rarely spend a lot of time together, don't always make super albums. But Potter's sidemen are extraordinary. On "Other Plans," his piano player establishes an encompassing atmosphere with just a few chords (and the spaces between them). When his bassist is asked to introduce the plaintive melody, he makes it sing.

As for Potter, he responds to this rarefied level of support with work of luminous inspiration and superlative technical execution. The prevailing mood of this music is reflective. But if the tempos of "Málaga Moon" and "Dream of Home" and the title track are medium, their concentrated intensity is not. Potter sounds like he pushes himself to his creative edge on every song. His solos are treatises of thematic elaboration, proclaimed in his clarion tenor saxophone tone. The only true ballad is "Aria for Anna." Potter (on soprano saxophone) and Mehldau release their closely held passion and let it flow freely and flower as lyricism.

This excellent album succumbs to the current fashion in jazz that prioritizes original composition. Potter is a much better player than composer. His pieces are always intelligent, and some, like "Other Plans," have nice melodies. But on *Eagle's Point*, he could not see his way clear to offer even one standard. It would have been fascinating to hear these four brilliant voices engage with some songs we know. And a newly assembled band, even one this good, might benefit from the secure footing of familiar material.—**Thomas Conrad**

ROCK/POP

JOHN LEVENTHAL
Rumble Strip

RumbleStrip Records (auditioned as CD). 2024. Leventhal, prod.; Leventhal, Jim Price, Mark Cordell, Gavin Lurssen, engs.

PERFORMANCE ★★★★★
SONICS ★★★★★

Across John Leventhal's 45-year career, he has produced records that won close to 20 Grammy Awards, written songs performed by artists from Joe Cocker to Shawn Colvin, and worked in the studio with musicians as varied as Jackson Browne and Johnny Cash. But until now, he has never occupied the role of "solo artist." That changes with the release of *Rumble Strip*.

The record combines Leventhal's signature guitar work with his passion for instrumental, classical, soul, country, and jazz-infused improvisational music. The album is assembled like a soundtrack, with instrumentals dominating the record, interspersed by vocal-driven tracks that act like runways and exit ramps. The guitar parts are often layered. They are sharp and never wilt, with a clarity that underscores Leventhal's great command of the instrument. It's a sophisticated sound with presence and purpose.

Despite the prevalance of instrumentals, the record's finest moments are the ones with vocals, by Leventhal and Rosanne Cash, his wife. The vocal songs have a character that feels cautious, dark, and lonesome—all evident, for example, on the single "That's All I Know About Arkansas" and also on "The Only Ghost," co-written with Marc Cohn, originally for Dr. John's final album. Here, the secret sauce simmers on the front burner. Their voices join in ways that induce chills. The songs stick with you long after the record has ended.

Rumble Strip is cinematic in sound and scope but in a way that's personal and sits close. The front and back covers—the boy on the front, the adult on the back—act as a metaphor for the journey captured across the album's 16 tracks, with tales that live between those two life stages, the author of that life winding up older and wiser with 45 years of tales to tell, a few of them told here.—**Ray Chelstowski**

scott walker audio

Anaheim • Dallas / Ft. Worth

1.

2.

VOODOO

SYNERGISTIC RESEARCH
NEVER COMPROMISE

IDEON audio

3.

TAIKO AUDIO

4.

We represent the BEST digital streamers

1. Aurender N30SA -- *digital transport / network streamer and server*
2. Synergistic Research Voodoo Server-- *roon core and bridge, the future of digital audio*
3. Ideon Audio Absolute Stream -- *award winning audio device catered to the finest music playback*
4. Taiko Audio Extreme -- *exceeding the boundries of audio streaming*

SOUTHWEST AUDIO FEST

Join us at SWAF - Mar 15th - 17th 2024 - Dallas, TX

Anaheim, CA

1215 N Tustin Ave
Anaheim, CA 92807

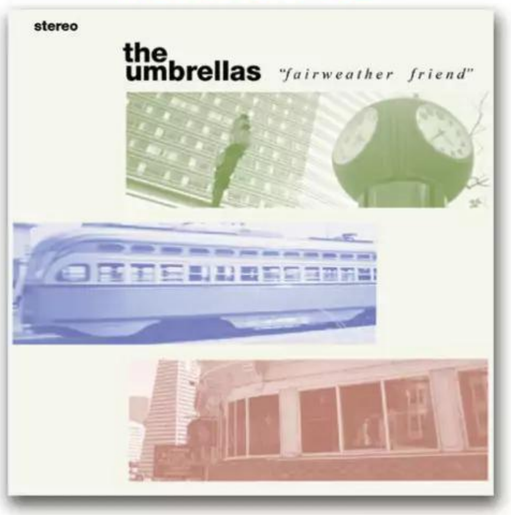
(714) 630-4100

Keller, TX

1101 Keller Pkwy
Keller, TX 76248

(817) 320-3145

ROCK/POP



UMBRELLAS
Fairweather Friend

Slumber Records SLR282 (CD). 2024. Mathew Ferrara, prod.; Jason Quever, Mark Gardener, engs.

PERFORMANCE ★★★★★
SONICS ★★★★★

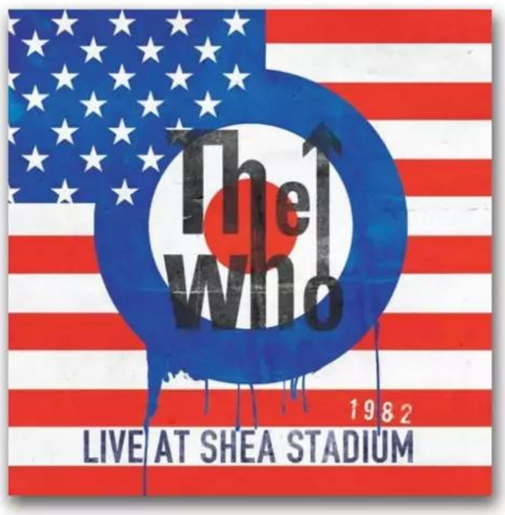
You might well expect a California band to be bright and sunny, and despite their drizzly name, the Umbrellas lives up to that assumption. The sound on *Fairweather Friend* is clean and clear, and Jason Quever's mix gives it space and lightness.

The band's four fine vocalists harmonize, but this isn't surf music. The leads, baritone Mathew Ferrara and mezzo-soprano Morgan Alice, their voices alternating across jangly guitars, make the band sound more like Orange Juice, the Scottish band, than the Beach Boys. *Fairweather Friend* is their second album, and as on their first, the occasional guitar solo reveals a nodding acquaintance with the Velvet Underground and the Byrds.

These guitars, though, do not resemble axes flexing macho power rock, nor even surfboards ready to hang ten; these guitars are more like teddy bears held lovingly with cool, ironic smiles. The rhythm section supports all that with a simple, effective beat. The contrasting voices of Ferrara and Alice, who take turns as lead singer, endow the album with unity while avoiding repetition.

From single and album-opener "Three Cheers!" onward, this is refreshingly breezy pop music. Every song could easily be a single. These are songs of love won, lost, and treasured, that show that light and poppy need not mean superficial. "Blue" and "P.M," which close the album, are cases in point. The latter finishes with the line, "does any of it matter/Or are we better off alone?"

Sonically, it's DIY, straightforward and frill-free—exactly what's needed in this kind of music. In a parallel universe, *Fairweather Friend* would be a megasuccess, but I fear this might be one of those albums that, though one of the year's best, slips by with little notice. I hope not. As an Englishman in rainy London, I'm drawn to Umbrellas.—**Phil Brett**



THE WHO
Live At Shea Stadium, 1982

Mercury Studios 5837222 (auditioned as CD). 2024. Geoff Kempin, Alice Webb, prods.; Richard Whittaker, Bob Pridden, Jon Astley, engs.

PERFORMANCE ★★★★★
SONICS ★★★★★

The Who's 1982 North American tour was intended to be their last. Instead, they'd go on to reunite for Live Aid in 1985, then again, in a new configuration without drummer Kenney Jones, in 1989. But the 1982 tour found the band in perfect rhythm. Their show on the second night of a two-night stand at New York City's Shea Stadium was released on DVD in 2015. Now the first (official) audio-only version is being released, with a set list that's among their strongest ever.

The band was touring *It's Hard*, their latest album, and four songs from that album populate the set: the album's title track, "Eminence Front," "Cry If You Want," and "Dangerous." Those songs were joined by classics from the 1960s—"Substitute," "I Can't Explain," "Pinball Wizard"—and '70s: "Behind Blue Eyes," "Baba O'Riley," "Won't Get Fooled Again," "Who Are You," and others—plus "The Quiet One" from the 1981 album *Face Dances*. Rounding things out were several well-known covers including "I Saw Her Standing There," "Twist and Shout," "Young Man Blues," and "Summertime Blues."

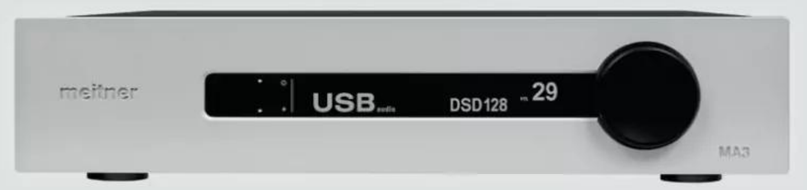
The audio-only version of this show loses none of the energy and intensity of the DVD release; In fact, it rather heightens perception of the audible power the band has always been known for. Shea was never known for good acoustics; critical elements of sound can seem to evaporate in space. This recording suffers from tamped-down highs and a muddled bottom, yet Pete Townshend, John Entwistle, and Kenney Jones brought such nuance and style to their playing that it cuts through the clutter and sets an audio altitude that lets you cruise the whole way through.

This record isn't just for completists. It's more than a keepsake: It's a snapshot of a legendary band playing powerful music on a significant tour.—**Ray Chelstowski**

FIND YOUR DAC

BEL CANTO BLACK DAC

EMM LABS DV2
STEREOPHILE CLASS A+



MEITNER MA3
STEREOPHILE CLASS A

CHORD DAVE
STEREOPHILE CLASS A+

NOW LISTEN HERE

Harrisburg, PA • Falls Church, VA
717-409-5050
nowlistenhere.net

SCHEDULE A DEMO TODAY!

2mr

Created uniquely
for Rega turntables

ORTOFON INC
500 Executive Blvd, Suite 102, Ossining, NY 10562
914.762.8646 · info@ortofon.us · ortofon.com

ortofon
accuracy in sound

STEREOPHILE ADVERTISER INDEX

Accuphase	6
Accustic Arts	54
Alta Audio	36
American Sound	62
Analog Matters	78
Antal Audio	12, 13
Aqua Acoustic Quality	49
Audio Advice	84
Audio Skies	78
Audio Ultra	103
AudioQuest	9
Axiss Audio	6, 58, 74
AXPONA	142
Bel Canto	82
Burmester	114
The Cable Company	32, 33
Clearaudio	70
Dan D'Agostino	57
David Lewis Audio	128
DS Audio	68
Electrocompaniet	13
Elusive Disc	130
Emotiva	122
Esprit Audio	96
Estelon Audio	100
Excel Audio	116
Fezz Audio	52
Fidelis Distribution	62
Fidelity Imports	46
Focal Naim America	118
Gauder Akustic	58
GoldenEar	61
Grimm Audio	17
Gryphon	112
Hana	44
Harbeth	62
Harmonia Distribution	22, 108, 136
Harmonic Resolution Systems	50
Hegel	126
I-O Data Device	134
JBL	10
Jim Suhre	88
Joseph Audio	141
KEF	20, 21
Kharma International	86
Kimber Kable	98
Kirmuss Audio	90
Legacy Audio	64
LINKWITZ	35
Linn Products	42, 43
Luxman	26
Magico	2
MBL	8
Music Direct	24, 25, 41, 132
Music Hall	Back Cover
Nordost	110
Now Listen Here	139
Ortofon	140
PAD HiFi	90
PLAYBACK Distribution	66
PrimaLuna	22, 136
PSB	29
Rogue Audio	18
Scott Walker Audio	138, 144, 145
Siltech	147
SME Limited	38
Soulution	74
Source Systems LTD	134
Stenheim	19
SVS	94
T+A Electroakustik	81
TAD Labs	90
Tekton	92
Triangle	12
Ultra Systems	144
Underwood HiFi	104
Upscale Audio	30
Used Cable	144
VAC	106
Vitus Audio	77
VooDoo	144
Weiss Engineering	72
Wilson Audio	4
Wireworld	124
Wynn Audio	14

The Ad Index is provided as a courtesy. The publisher is not liable for incorrect information or excluded listings. Advertisers should contact their sales representative to correct or update a listing.

ROCK/POP

UFO
Lights Out

Chrysalis CRVX1531 (3 LPs). 1977/2024. James Batsford, reissue project manager; Andy Pearce, Matt Wortham, remastering and cutting engs.

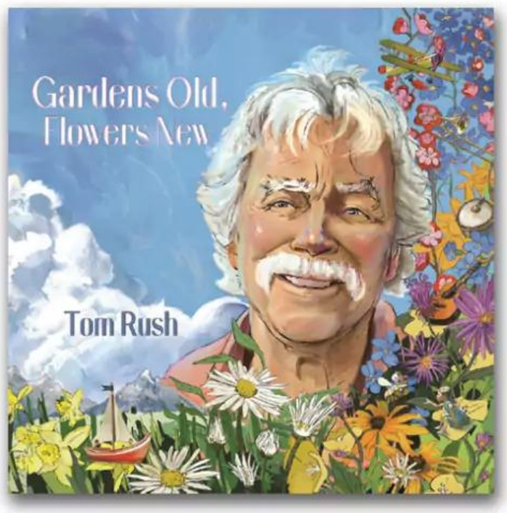
PERFORMANCE ★★★★½
SONICS ★★★★½

In 1974, former Scorpions guitarist Michael Schenker joined UK quartet UFO and turned them away from space rock and toward hard rock. Six UFO albums followed, all featuring Schenker's playing and songwriting. 1977's *Lights Out* broke the band out of the crowded hard-rock wolfpack.

Lights Out, UFO's highest-charting album in the US, was recorded at London's AIR studios. It has now been reissued in the form of this 180gm, triple-LP version, pressed at GZ in the Czech Republic. The mercurial Schenker's guitar provides the backbone of the anthemic title track—oddly sequenced as the closer to side one on the vinyl version—in which Moog howls about the same dystopian London that, in a parallel musical universe, inspired The Clash: "From the backstreets there's a rumblin'/Smell of anarchy/No more nice time, bright boy shoe shines/Pie in the sky dreams." A big reason the band broke out was the violins on the piano-led power ballad "Try Me"; that track has been sharpened considerably in this remastering, relative to the OG pressings.

The biggest surprise here, which shows that UFO was determined to be more than hard-rock blasters, is the violin-backed cover of Love's "Alone Again Or." Fluffed up with fiddles, a dash of Pink Floyd–like spaciousness, and a Schenker solo kept under tight command, closer "Love to Love" is a classic '70s hard rock power ballad.

It's now apparent that UFO was one of a number of bands that wisely recorded many of its live shows. Here, in addition to the remastered original LP, a 1977 show from the *Lights Out* tour, recorded at London's Roundhouse and remixed for this release, has inferior fidelity but shows that the band, always a well-oiled machine on the road, could bring it with both barrels live.—**Robert Baird**



TOM RUSH
Gardens Old, Flowers New

Appleseed Recordings (auditioned as CD). 2024. Matt Nakoa, prod.; Mikhail Pivovarov, eng.

PERFORMANCE ★★★★½
SONICS ★★★★½

Tom Rush was at the leading edge of the 1960's folk movement. Songs of his like "No Regrets" set the stage for what would become the singer-songwriter movement. He helped many musicians who today are better known—Joni Mitchell, Jackson Browne, James Taylor—get started.

Through the mid-1970s, his output was prolific; thereafter, it became sporadic with long gaps between releases. But Rush has always toured regularly, and it appears that at the tender age of 82, he found himself armed with a collection of songs that planted the seeds for what became his first studio record in five years.

Gardens Old, Flowers New is a triumph. Across 14 tracks, the album presents him in a form as fit as ever. These songs are filled with a sense of promise, good-natured humor, and fun.

Throughout, Rush delivers acoustic guitar parts that sit squarely on the contemporary folk foundation he is known for. His playing is clean, precise, and absent flash. That alone might have been enough to make the record memorable. But it's wide-open rockers like "Nothin' But a Man" and "It All Comes Down To Love" that surprise: The arrangements have a sense of youthful abandon, supported by fantastic horn charts and slick electric guitar parts. They feel perfectly modern, with a bounce that balances the record.

The album's title is a line that appears in two of the songs. It conveys the idea that many things in life, like watching your kids grow up or falling in love, have happened millions of times through the ages, yet each time it happens, it is fresh and different.

That's a perfect metaphor for what sets this record apart. It's not that what Rush does here is something new, something he hasn't done before. It's that what he's done here, however often it has been done previously, feels original and familiar at the same time.—**Ray Chelstowski**

"A superbly well-balanced loudspeaker that gave me extended hours of listening pleasure"
John Atkinson, Stereophile

JosephAudio Perspective2 Graphene
Get the full story at
www.josephaudio.com

"I was astonished ... its pulsing bass line sent shivers down my spine... I recommend it even more highly than I did the original"
John Atkinson, Stereophile

JosephAudio

EVERYTHING YOU HEAR IS TRUE
(800) 474-HIFI (4434)

YOU'VE NEVER HEARD IT THIS GOOD!

AXPONA

AUDIO EXPO NORTH AMERICA

APRIL 12-14, 2024 • CHICAGO SCHAUMBURG CONVENTION CENTER

TICKETS ON SALE NOW!
GET YOUR TICKETS AT AXPONA.COM!

See these companies and brands (and more) represented at AXPONA:

64 Audio
Acora Acoustics
Acoustic Sounds
ADD Powr-Coherence Systems
AEC Connectors
AGD Productions, Inc
Aidas Cartridges
AIM Electronics
Alta Audio
Altitude Audio
AM Belgium
American Sound
AMPED
ampsandsound
Analysis Plus
Antal Audio Group
ANTICABLES
Aretai
ArgentPur Cables
Aries Cerat
Arya Audio
ATC Loudspeakers
Atma-Sphere
ATOHM Loudspeakers
Atoll Electronics
ATR Magnetics
Audeze
AUDIO BY VAN ALSTINE
Audio Excellent
Audio Note UK
AudioQuest
Audio-Technica
AURALiC North America Inc.
Aurender
Austin Audio Works
AV Luxury Group International
AV RoomService
AXISS Audio
Balanced Audio Technology
BCW Supplies
Bel Canto
Benchmark Media
Bending Wave USA
Berkeley Audio Design
Bluesound
Bob Carver Company
Box Furniture Co.
Bricasti Design
BRODMANN ACOUSTICS by ARCEAU ARTS GmbH
Butcher Block Acoustics
Cambridge Audio
Campfire Audio
Candmo Inc
Cardas Audio
Chicago Audio Society
Cinetec
Clarus
CLAYTON SHAW ACOUSTIC LAB
Concierge Audio
Constellation Audio
Convergent Audio Technology
Creative Sound Solutions
Credo Audio Switzerland
Crystal Cable
DALI
Dan Clark Audio
Danville Signal Processing
Darlington Labs
DarTZeel America
Dayton Audio
Delmark Records
DeVore Fidelity
DH Labs Inc.
direct audio
Doshi Audio
Dynaudio
Eahibrid
ELAC
Elite AV Distribution
Elusive Disc
Empire Ears
Endow Audio
Enmusic, Inc.
ESD Acoustic Hangzhou Co LTD
Estelon
Etymotic
Falcon Acoustics
Feliks Audio
Fern & Roby
Fidelis Distribution
Fidelity Imports
Final
Fine Sounds Americas
Focal Naim North America
For The Record Vinyl
Garrard
Gershman Acoustics
Geshelli Labs
Gestalt Audio Design
GIK Acoustics
Glenn Poor's Audio Video
Gold Pass Hospitality Suite
Goldmund
Grimm Audio
Gryphon Audio Designs ApS
GTT Audio
Gus Fugazi Records
Haniwa
Harman International
Harmonia Distribution
Hear This
Heaven 11 Audio
Hegel America
High Water Sound
Holm Audio
HornSolutions
HSU Research
Iconoclast Cable
iFi Audio
inakustik
Infigo Audio
Innuos
I-O Data Device
iSonic
J.Sikora
Jamie Audio
Johnny G Collectibles
Joseph Audio
Just Audio
Kanto Audio
Keith Monks Audio
Kimber Kable
KIN series by Totem
Kinetics Noise Control
Kirmuss Audio
KMD ENGINEERING CO. Ltd.
Krell Industries
KUBALA-SOSNA
LCH Audio
Legacy Audio
LINKWITZ.audio
Linn Products
Lumin
Luxman
Luxury Audio Group
MA Recordings
MACO™
Madisound
Madly Audio
MAGICO
Magna Risers
Magnepan
Manley Laboratories
Martin Logan
Masimo Consumer
Matthew Bond Audio
MBL North America
Merason
Metaxas & Sins
Meze Audio
Mimic-Audio
MoFi Distribution
Mojo Audio
Mon Acoustic
Monarch Systems
Moon Audio
MSB Technology
Music Direct
Music for Pleasure
Musical Artisans Inc
Mytek
NAD
Next Level HiFi
Nordost
Notable Audio
Octave Audio
Odyssey
Orchard Audio
PAD HiFi
Parts Express
Pass Labs
Perfect8 Technologies
Philharmonic Audio
Phillips Design
PictureSleeve45s
Pink Faun
Pro Audio Ltd.
Pro-Ject Audio Systems
ProSoCoustic
PS Audio
PureAudioProject
Puritan Audio Labs
QLN
Qobuz
Quintessence Audio
RAAL-requisite
RBH Sound
Record Wonderland
Refined Audio
Renewal by Andersen Reserved
REVO US
Rhythm Distribution
Riviera Labs
Rogue Audio Inc.
RTM Industries SAS
Rutherford Audio
Saturday Audio Exchange
SB Acoustics
Schiit Audio
Sennheiser
Sierra Sound
Silversmith Audio
Snake River Audio
SOTA Turntables
Source Systems Ltd.
Sparkos Labs
Speaker Snap
SPL
Starke Sound
Steinway Lyngdorf
Stenheim
Stereo Haven
Stereo Integrity
Stereophile
Stillpoints
Supatrac
SVS
Swan Song Audio
Synergistic Research
Synthax
T+A North America
TAD Labs
Technics / Rediscover Music
The Audio Experience
The Audio Foundation:
The Sound Organisation
Theoretica Applied Physics
Tien Audio
Tom Christiansen Audio
Tone Imports
Tönnen Sound
Totem Acoustic
Trafomatic
Treehaus Audiolab
Triangle Art
Ultra Fidelis
Upscale Audio
VAC/Valve Amplification Company
VANA Ltd
VANATOO
Vandersteen Audio
VIABLUE™
Vinnie Rossi
Vitus Audio
VK Music
Von Schweikert Audio
VPE Electrodynamics
VTL
Wadax
Wally Tools
Warwick Acoustics
WattGate
WBT-USA
Well Pleased AV
WELLFLOAT
Westone Audio
Wolf Audio Systems
Worldwide Wholesales
Wynn Audio
Yamaha
YG Acoustics
Ypsilon
Zesto Audio
ZMF Headphones
Zu Audio

Exhibit list as of 2/09/24. Visit www.axpona.com for an updated list

See the latest exhibitor list here:

Streaming Sponsor

qobuz

MANUFACTURERS' COMMENTS

THIS ISSUE: Representatives of Linn, Octave Audio, Cambridge Audio, and Silent Angel respond to our reviews of their products.

Linn Klimax Solo 800

We are thrilled with *Stereophile*'s verdict on the Klimax Solo 800. Jason's considered words acknowledge the innovation and hard work that have gone into development of this new flagship amplifier, in a new category for us at Linn.

John Atkinson's verdict based on his measurements is also graciously received. However, the charts published differ significantly from our own repeated measurements here at the factory. Linn's working assumption is that the model measured by *Stereophile* was not performing to the level of a current, full-production Solo 800. We have decided to send a new amplifier to Mr. Atkinson for remeasuring, and *Stereophile* has kindly agreed to publish these new measurements in a future issue once they are available.

Joe Rodger, Brand Manager
Linn

Octave Audio V70 Class A

On behalf of Andreas Hofmann and his team at Octave Audio, we offer a big thank you to *Stereophile* and Robert Schryer for an absolutely wonderful review of our V70 Class A integrated amplifier. It's clear that Rob is a true lover of all kinds of music, and we enjoyed the many ways he described how our amplifier engages with music immensely.

Our thanks, too, to John Atkinson for a fair and accurate appraisal of the amplifier's measurements. In designing such an amplifier, there is always a balance to achieve when seeking improvements in measured performance. It would have been straightforward to make substantial improvements in the measurements; however, those changes would come at the expense of the amp's ultimate musicality for very little "real world" gain. It seems Rob—and numerous V70 Class A owners—agree that we've struck the right balance.

We also wish to highlight principles that are equally important to us as the sound of all Octave products: reliability and longevity. As Rob writes, even in this class-A design, power tubes will normally last 3–5 years, and our input/driver tubes for 10 years or more. This has as much to do with all the innovative Octave technologies Rob described as it does with how carefully we employ our Power Management and Electronic Protection circuits throughout the amplifier to extend the service life of the tubes and many other critical parts and circuits. Finally, our unique pentode circuit and extensive in-house development and production of bespoke transformers—along with our oversight of custom parts made locally by specialists to our specifications—allow us to achieve spectacular results using lower bias levels (meaning lower operating temperatures) to further ensure longevity and reliability. With sincere thanks,

Mike Manousselis and John Quick
Dynaudio North America Inc.

Cambridge Audio MXN10

We intended the MXN10 to breathe new life into old hi-fi systems. It's clear listeners are looking for streaming solutions but perhaps don't want to give up on their prized setups—or they have a hankering to dip into vintage hi-fi without going fully analog. The MXN10's compact, discreet design means you can slot it into your system easily. Tuck it away or give it center stage; the choice is yours.

The convenience of streamed music was once let down by its sound quality and accessibility. That's no longer the case thanks to faster broadband speeds, better codecs, and a wider choice of services. The MXN10 brings streaming and our StreamMagic streaming platform within financial reach of many more people. We developed StreamMagic at our headquarters in London for no-compromise, rock-solid, hi-fi music streaming that's intuitive to use.

Above all, at Cambridge Audio, our aim is to connect people to the power of music. Outside work, many of us are musicians or sound engineers, and all of us are music lovers. Part of the reason we launched our *Made by Music* podcast last year was to meet our musical heroes. If that passion for music is evident in our products, from MXN10 to the flagship Edge series, we've done our job right.

Matthew Dore, Chief Technology Officer
Cambridge Audio

Silent Angel Bonn NX

Everyone at Silent Angel would like to thank Jim Austin for his thorough and thought-provoking review. I think the important takeaways here are that, due to the Bonn NX's perfectionist design and construction, it is fully worthy of inclusion in the finest systems, where its aesthetic

beauty and vaultlike construction will be fully appreciated. Most important, however, is that Jim heard an improvement with the Bonn NX in the system. As Jim concludes, "maybe a $30 ... network switch is a poor fit for a perfectionist audio system." We certainly think so!

The magnitude of the improvement wrought by the Bonn NX, and how much that improvement is worth, are questions to be answered by each system owner. I can tell you that the sales success we've enjoyed suggests that many perfectionist system owners believe that the Bonn NX represents a valuable upgrade to high-performance audio systems. We encourage *Stereophile* readers to evaluate the Bonn NX for themselves and appreciate the audible improvements it provides.

Anthony Chiarella,
Director of Sales and Marketing
Silent Angel

MAGICO

ALL NEW S3

scott walker audio
CA: (714) 630-4100 • TX: (817) 320-3145

Another Great usedcable.com

Plug into our 30 years of high-end cable expertise

- 1 Year Warranty
- 30 Day No Hassle Exchange
- Free Shipping over $50
- Free System Consultation

usedcable.com
800-328-9973
usedcable@usedcable.com
UsedCable.com is a trusted Cable Company joint

The Vinyl Cleaner PRO X
for vinyl lovers
The only fully automated, ultrasonic and mechanical cleaning system for the ones you love.

Audio Desk Systeme
Vinyl Cleaner PRO X
215-862-6570
ultra@ultrasystem.com

VooDoo CABLE
THE ART OF HIGH RESOLUTION AUDIO

The Radically Cost-Effective Sonic Upgrade for Your Entire System

2023 the absolute sound EDITORS' CHOICE AWARDS

Iso·Pod

Set of 3 - $249
Set of 4 - $449
In Silver or Black

Component Isolation System
VISIT US AT WWW.VOODOOCABLE.NET

CABLE COMPANY
AVAILABLE AT
THE CABLE COMPANY 800.328.9973
Cable@TheCableCo.Com

MSB DAC OWNERS

HERE IS THE ULTIMATE UPGRADE
FOR YOUR MSB SELECT & REFERENCE DAC:

- SRX MSB SPEC DC POWER LEADS - $5995
- (2) SR PURPLE FUSES - $199/EA

** IN HOME AUDITIONS AVAILABLE **

SYNERGISTIC RESEARCH
NEVER COMPROMISE • SYNERGISTICRESEARCH.COM

scott walker audio
CA: (714) 630-4100 • TX: (817) 320-3145

"... a journey in which discovery follows discovery"
— Art Dudley, *Stereophile*

TIGHT LINES

LP, CD and Download available from
sashamatson.com *and* **amazon.com**

You Can Build Great Sound

The GT-102 Stereo Amplifier is a Stereophile Class B recommended component. High praise, given its low price.

The PR-102 is a versatile preamp that pairs perfectly with the GT-102. You can add a remote control, headphone amp, or an MM phono preamp.

Hundreds of audiophiles enjoy the great sound of these components. They are available in kit or assembled form. Kit builders get an extraordinary value, a fun project, and a great feeling of accomplishment.

For more information, go to
www.akitika.com

AkitikA

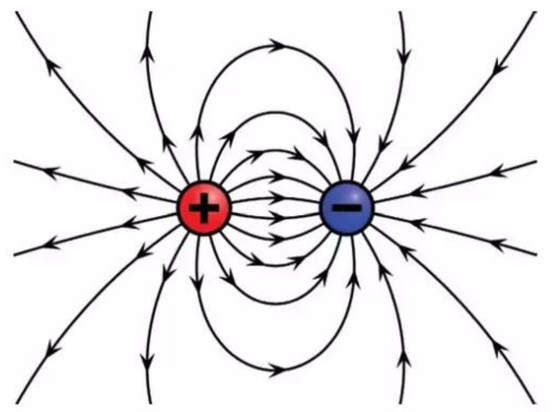
LONG ISLAND, NEW YORK

Arcam, Audeze, Audience, Audio Desk, Audioquest, Berkeley Audio Design, Bryston, Cardas, Conrad-Johnson, Clarus, Esoteric, JBL Synthesis, Jeff Rowland, Hegel, Isotek, Koetsu, Lexicon, Lyra, Mark Levinson, Lumin, Martin-Logan, Meitner, My Sonic Lab, Oracle Audio, Ortofon, Purist Audio Design, Plinius, ProAc, Revel, Rogers Fidelity, SME, Sony ES/XBR, Stax, Sutherland, Symposium Acoustics, Tannoy Prestige, Totem, Triangle, Tsakiridis, VPI, and many more.

Large selection of fine pre-owned gear, quality trades welcome, analog guru on board

New York Sound & Vision (631) 321-8969
or visit www.newyorksoundandvision.com

Audiophile Essentials
EDITOR
CD PACKAGE
shop.stereophile.com



AUDIO ART
Since 1976

VIRGINIA'S OLDEST
HIGH END ESTABLISHMENT

Acoustic Energy, Acoustic Signature, AVM, Ayre, Canton, Cardas, Clearaudio, Eversolo, Fezz Audio, Fyne, Gold Note, Grado, Hana, Hegel, Jeff Rowland, Martin Logan, Music Hall, Ortofon, Proac, ProJect, Rega, Shunyata, SME, Vertere, Weiss.

804.358.5300
www.audioartusa.net
audioartusa@aol.com

Image courtesy Geek3

MY BACK PAGES

BY ROGIER VAN BAKEL

THIS ISSUE: Staying grounded and afloat.

(Un)healthy obsessions

During a ferocious storm one recent Saturday, firefighters knocked on my door and urged my family and me to evacuate. The gale had smashed loose a neighbor's large propane tank and plunged it into the choppy waters of the fjord we live on. An explosion was possible, we were told. Five minutes later, our teenage daughters, our dogs, and my wife and I were in the car on our way to safety. (No blast occurred.)

Coincidentally, the last thing I'd read that turbulent morning was the *Washington Post*'s front-page story[1] about the late Ken Fritz, a diehard audiophile who'd spent 40 years creating "the best stereo system in the world," alienating members of his family in the process.[2] Both the evacuation and the Fritz tale put me in a pensive mood. If you'll pardon the triteness, each reminded me that life is precious and fragile, as are our relationships with loved ones. We can't afford to take either for granted.

But the newspaper article and its aftermath proved exasperating at the same time. Many of the 3500-plus reader comments were cruel. An impromptu posse sneered and jeered at the "miserable" and "pathetic" dead man who had supposedly "wasted his life." Perhaps those commenters forgot that Fritz was an entrepreneur who'd built a successful business and provided for his family until he died. Who the hell were they to judge his entire earthly existence? It's true that Fritz divorced his first wife, who the *Post* article said was an alcoholic, and that he severed ties with his oldest son after a terrible argument. But he seems to have had a loving bond with his second spouse, who was by his side until the end. His daughters helped him operate his turntable and remotes when ALS destroyed his fine motor skills.

A father and son becoming estranged is grievous indeed. But let's be real: Billions of familial relationships are weighed down by quiet grudges and resentments. That's as regrettable as it is common. Who doesn't have a skeleton or two in the family closet, or dirty laundry they'd rather not see aired in, say, the *Washington Post*? How many of the backbiters in the comments section were on their second or third marriages when they wrote those snide, spiteful assessments?

I was also mystified by the schadenfreude over the man's million-dollar stereo system fetching only 15 cents on the dollar when it was sold off. No audiophile I know believes that his or her equipment is a future fount of money. The dividends our stereos pay are in the here and now—in how satisfying the ownership experience is and how deeply it pulls us into the music. Why is it sad that Fritz didn't get all his money back after he was dead? No one in their right mind would apply that logic to smokers, drinkers, or people whose hobbies are travel, gastronomy, gambling, boating, personal aircraft, or luxury shopping sprees.

Like other passionate pursuits, the quest for perfect sound carries the virus of obsession. Remember Takeo Morita, the Japanese audiophile who spent $40,000 erecting a utility pole to ensure clean power? Online, scads of fixated 'philes brawl over MQA, R2R vs Delta Sigma DACs, and the ideal shape and weight of $5000 tonearms. I've heard hi-fi devotees sort-of quip that they'd find it hard to choose between their stereo system and their romantic partner.[3] Among evergreen audiophile tropes is the one about sneaking stereo purchases past a spouse who is kept in the dark about the product's sudden presence, especially its cost. "Isn't that the same," my friend Justin Hunting asked rhetorically, "as alcoholics hiding bottles around the house where their significant other won't find them?"

Justin ought to know. A 40-something cinematographer who lives in Norfolk, England, he's been bitten deeply by the audio bug. *Maimed*, perhaps. He calls himself "literally a junkie." In the span of a few minutes, he can go from "High-end equipment makes me very happy" to describing it as an oppressive yoke. "It's a type of hoarding," he ventures, something that stems from "abandonment and loneliness."

Years ago, Justin promised a girlfriend a romantic weekend abroad and ended up taking her to a fleabag hotel in the UK because he'd spent all his money on an amplifier. A man of wry wit, he used to call his stereo PAM, an acronym for People Avoidance Method.

Here's a conversation we had just last month. Justin, jokingly: "I'd sell my grandma for some Focal Grande Utopias." Me: "Now I'm worried about your grandma." Justin: "She's dead." Me: "How are the Grande Utopias?"

We laughed, but there remained a certain heaviness. Justin has spent so much on his audio system, and so *fast*, that it's now worth triple what it was 18 months ago—around $200,000, he reckons. Movie jobs notwithstanding, this profligacy is unsupported by a steady income. A few years ago, Justin made a lot of money in cryptocurrencies, but he says it's pretty much gone now. Meanwhile, his elderly dad is in a care facility that almost doubled its price earlier this year. Justin pays the home's monthly bills, but his finances are precarious. "If my dad's life insurance doesn't cough up, I'll be in serious debt," he told me.

He knows that the pace and level of his stereo purchases aren't sustainable. One recent Tuesday, he texted me in an apparent state of elation, saying he'd stepped off the hedonic treadmill.[4] "I'm done buying gear. Talking to you has cemented it. I'm out. I'm free." He then sent me a GIF from *The Shawshank Redemption* with Tim Robbins as Andy Dufresne smiling quietly after his prison break.

Twelve days later came another text. Justin, who owns three subwoofers including a $7000 REL No.31 and a $10,000 Perlisten D215s, had decided he needed a fourth. "The Perlisten D15 is $6000, but I think I can get it down to under 5k," he explained excitedly. At best, it sounded like a pyrrhic triumph.

People like Ken Fritz and Justin Hunting, though intelligent and colorful, serve as reminders that we should probably stay within the zone between "far out" and "too far."

Or, as liquor ads remind us, in small type so as not to spoil the fun: *Enjoy, but consume responsibly.* ■

1 See shorturl.at/ilvyJ.

2 See My Back Pages in last month's *Stereophile*.

3 See shorturl.at/ilPS5 for an example.

4 See psychologytoday.com/us/basics/hedonic-treadmill.

SILTECH
EST. 1983

Excellence: From Our Lab to Your Listening Room

AXPONA
AUDIO EXPO NORTH AMERICA
April 12 - 14
Monarch Systems Ltd.
Suite 434

www.siltechcables.com

US & Canada distribution by Monarch Systems Ltd.
tel: +1 (720) 399-0072
www.monarch-systems.com

MONARCH
Systems Distribution

MonarchSystemsLtd

Monarchsystemsltd

Systemsmonarch

music hall

S T E A L T H

THE SILENT POWER OF PRECISION

Meet The Stealth: Music Hall's direct-drive turntable, the perfect blend of high-end performance and affordability. Its expertly engineered motor and balanced platter ensure accuracy with every spin. Coupled with a precision-focused tonearm and the acclaimed Ortofon 2M Blue cartridge, the Stealth delivers pure, unmistakable sonic clarity. The Stealth: You won't even know it's there—until the music plays.

part-time audiophile REVIEWERS CHOICE

BEST VALUE

"This is a workhorse... it sounds fantastic, it's amenable to tweaks and other improvements, and it has a genuine, high-end turntable sound." - Marc Phillips [Part Time Audiophile]

"The purchase of a Stealth turntable could be an endpoint. It will open the door to the high-end without breaking the bank." - Guy Lemcoe [The Audio Beat]

"The Stealth's best trait was how conspicuously it carried the tune... I can think of no record player under $2,000 that I'd rather use. Or recommend." - Herb Reichert [Stereophile]

Find an Authorized Retailer or Order Online

musichallaudio.com